RUTGERS
Organics

October 28, 2008

VIA CERTIFIED MAIL

Mary Logan
U S. EPA Region V (SR-6J)
77 W Jackson Boulevard
Chicago, IL 60604-3590

Sheila Abraham
Ohio EPA - NE District Office
Div Of Emergency & Remedial Response
2110 East Aurora Road
Twinsburg, OH 44087

Remedial Response Section Manager
Ohio EPA - DERR
P O Box 1049
Lazarus Government Center Office
122 South Front Street
Columbus, OH 43216-1049

Re: SEPTEMBER 2008 MONTHLY REPORT
RI/FS & REMEDIAL DESIGN & REMOVAL ACTION
NEASE CHEMICAL SITE
SALEM, OHIO

In accordance with Paragraph X E of the Administrative Order by Consent regarding a Remedial Investigation/Feasibility Study (RI/FS) of the Nease Chemical Site in Salem, Ohio, attached is a copy of the September 2008 RI/FS Progress Report This report also includes the monthly progress report for the remedial design (OU-2) in accordance with Paragraph X of the Administrative Order on Consent, effective as of May 10, 2006

Additionally, in accordance with Paragraph 14 of the Administrative Order by Consent, signed December 17, 1993, attached is a copy of September 2008 Removal Action Progress Report

The agency agreed to submit this report later than the 10th working day of the month.

Sincerely,

Rainer Domalski

Dr Rainer F. Domalski
Site Coordinator

Enclosures

cc M. Hardy/Heidi Goldstein – Thompson Hine
Steve Finn – Golder Associates, Inc.

102808

US EPA RECORDS CENTER REGION 5
397204

201 Struble Road, State College, PA 16801
Phone. 814-231-9200; Fax 814-239-1567

NEASE CHEMICAL SITE, SALEM, OHIO
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
REMEDIAL DESIGN (OU-2)
MONTHLY PROGRESS REPORT
SEPTEMBER 2008

1. INTRODUCTION

This progress report has been prepared in accordance with Paragraph XE of the Administrative Order of Consent (AOC) regarding a Remedial Investigation/Feasibility Study (RI/FS) and Paragraph X of the Administrative Order on Consent regarding the Remedial Design (RD/OU-2) of the Nease Chemical Site in Salem, Ohio. The report summarizes the major RI/FS and RD actions during the month along with investigation results and any problems encountered in the project Activities planned for next month are also presented.

2 SUMMARY OF ACTIVITIES PERFORMED

2 1 PROJECT ACTIVITY SUMMARY

The activities that were initiated and/or completed during the month are described. All activities were performed in accordance with the detailed protocol provided in the approved Work Plan.

2.2 FIELDWORK

2.2 1 RI/FS

None.

2 2.2 RD (OU-2)

None

2.3 Reports

2.3.1 RI/FS

A draft Interim Deliverable for the OU-3 Feasibility Study (FS) was submitted to the agencies for review. Agencies' comments to this document were addressed during this month. The draft final FS was submitted by the March 20, 2008 and received agencies' comments on May 7, 2008. The revised final FS was submitted on June 5, 2008. The document was finally approved by US EPA in a letter dated June 30, 2008.

A Proposed Remedial Action Plan (PRAP) was published by EPA in July 2008. The public comment period run from July 14 through August 14, 2008. A public meeting was held in the public library in Salem on July 31, 2008. The final Record of Decision (ROD) was signed by the agency on September 24, 2008.

2.3.2 RD (OU-2)

Baseline Technical Memorandum Report

- Data validation of the analytical results of the discrete mirex surface soil samples
- Revising the Vapor Intrusion Assessment and Mitigation Report based on comments from the agencies.
- Continued to work on a response to agency recommendations/considerations including a bedrock contour map and additional investigation work needed in the southern site area.

2 4 MEETINGS

None.

3 VARIATIONS FROM THE APPROVED WORK PLAN

None.

4 RESULTS OF SAMPLING, TESTS AND ANALYSES

Results from sampling events were and will be provided to the agencies in specific reports.

5 PROJECT SCHEDULE

The current Work Plan schedule identifies completion and target dates for project activities. Those scheduled to occur over the next several months include:

- Finalize PDI work incl. the preparation of Technical Memoranda.
- Start Remedial Design Work

6 DIFFICULTIES ENCOUNTERED AND ACTION TAKEN TO RESOLVE PROBLEMS

No significant difficulties were encountered.

7 PERSONNEL CHANGES

None

8 ANTICIPATED PROJECT ACTIVITIES FOR OCTOBER 2008

- Monthly Progress Report September 2008
- RD (OU-2)
  - Baseline Technical Memorandum Report –
    - Response to agency recommendations and considerations and for implementation of interim measures for the removal of NAPL at TW06-21.

- Submit a revised Vapor Intrusion Assessment and Mitigation Report based on agency comments.
- Prepare a summary/recommendation memorandum regarding the discrete mirex surface soil sample results.
- Submit letters to adjacent property owner's presenting the sampling results and boring logs for monitoring wells installed in their property.
- Bedrock contour map.

TABLE 1
NEASE CHEMICAL SITE, SALEM, OHIO
RI/FS AND RD (OU-2) SCHEDULE

DATE	TASK/ACTIVITY/DELIVERABLE/MILESTONE	
	RI/FS	RD (OU-2)
	Documentation of the Site Activities through July 31, 2004 can be reviewed in the July 2004 Monthly Progress Report	
August 30, 2004	US EPA Region V/ OEPA approve Endangerment Assessment	
September 1, 2004	Draft Feasibility Study (OU-2) submitted to the agencies for review	
September 9, 2004	Submit Monthly Progress Report	
September 13, 2004	Submit Final Revision to Endangerment Assessment	
October 8, 2004	Submit Monthly Progress Report	
November 10, 2004	Submit Monthly Progress Report	
November 22, 2004	Received Agencies' comments for draft FS (OU-2)	
December 10, 2004	Submit Monthly Progress Report	
January 10, 2005	Submit Monthly Progress Report	
February 10, 2005	Submit Monthly Progress Report	
March 1, 2005	Final Draft Feasibility Study (OU-2) submitted to agencies for review	
March 4, 2005	Submit Monthly Progress Report	
April 8, 2005	Submit Monthly Progress Report	
April 21, 2005	US EPA Region V/OEPA approve Final Feasibility Study for OU-2	
May 9, 2005	Submit Monthly Progress Report	
May 31, 2005	US EPA Region V published the Proposed Remedial Action the OU-2 (onsite)	
June 9, 2005	Submit Monthly Progress Report	
July 8, 2005	Submit Monthly Progress Report	
August 10, 2005	Submit Monthly Progress Report	
Aug. 1 – 15, 2005	MFLBC – Reconnaissance of sediment bodies	
September 9, 2005	Submit Monthly Progress Report	
September 29, 2005	US EPA Region V signs Final Record of Decision for OU-2	
Oct. 10, 2005	Submit Monthly Progress Report	

DATE	TASK/ACTIVITY/DELIVERABLE/MILESTONE	
	RI/FS	RD (OU-2)
November 9, 2005	Submit Monthly Progress Report	
December 8, 2005	Submit Monthly Progress Report	
January 9, 2006	Submit Monthly Progress Report	
February 8, 2006	Submit Monthly Progress Report	
March 15, 2006	Submit Monthly Progress Report	
April 10, 2006	Submit Monthly Progress Report	
May 8, 2006	Submit Monthly Progress Report	
May 10, 2006		Administrative Order on Consent for OU-2 Remedial Design effective
May 25, 2006		Submittal of draft PDI Workplan
June 8, 2006	Submit Monthly Progress Report	
June 9, 2006		ACO Financial Assurance – Trust Fund placed
June 28, 2006		US EPA comments to draft PDI workplan received
July 10, 2006	Submit Monthly Progress Report	
July 12, 2006		Sampling of well PZ-6B-U
Aug. 1, 2006		Submit revised PDI Workplan
Aug. 4, 2006	Submit Monthly Progress Report	
Aug. 21, 2006		Commenced with PDI Fieldwork
Aug 28, 2006		Conditional Approval of PDI Workplan
Sept. 8, 2006	Submit Monthly Progress Report	
Sept. 18, 2006	Soil Sampling in the MFLBC Flood Plain	
Sept. 27, 2006		Submit Final PDI Workplan incl response to agencies' comments
October 8, 2006	Submit Monthly Progress Report	
Nov 6, 2006	Submit Monthly Progress Report	
Dec. 12, 2006	Submit Monthly Progress Report	
Dec. 13, 2006	OU-3 Meeting in US EPA Chicago Office	
Jan 8, 2007	Submit Monthly Progress Report	
Febr 6, 2007	Submit Monthly Progress Report	
March 7, 2007		Submittal S/S/S Treatability Study Report through Phase III
March 19, 2007	Submit Monthly Progress Report	
March 22, 2007		Submittal Proposal Bio-Treatability Study for Benzene in Groundwater
April 4, 3007	Submit Monthly Progress Report	
May 21, 2007	Submit Monthly Progress Report	
June 7, 2007	Submit Monthly Progress Report	

DATE	TASK/ACTIVITY/DELIVERABLE/MILESTONE
June 13, 2007 – June 30, 2007	Submit Technical Memorandum – Baseline Conditions to agencies Installed Sub-slab Vapor Systems at two residential homes
July 6, 2007	Submit Monthly Progress Report
August 1, 2007	Agencies' approval for Phase IV S/S/S Treatability Study
Aug. 7, 2007	Submit Monthly Progress Report
September 24, 2007	Submit Monthly Progress Report
October 5, 2004	Submit Monthly Progress Report
November 7, 2007	Submit Monthly Progress Report
December 12, 2007	Submit Interim Deliverable for OU-3 FS
December 21, 2007	Submit Monthly Progress Report
January 3, 2008	Submit Monthly Progress Report
February 7, 2008	Submit Monthly Progress Report
February 28, 2008	o Letter to agencies about Proposed Mirex Analysis of discrete soil samples o Memo to agencies regarding Analytical Laboratories for Mirex Testing
February 29, 2008	Submit Vapor Intrusion Report to agencies
March 3, 2008	Submit Monthly Progress Report
March 11, 2008	Submit S/S/S Treatability Study to agencies
March 14, 2008	Submit NZVI Pilot Study to agencies
March 20, 2008	Submit Draft FS (OU-3) to agencies
April 8, 2008	Submit Monthly Progress Report
May 7, 2008	Submit Monthly Progress Report
June 5, 2008	Received Agencies' Comments to Draft FS (OU-3) Submit Revised Final FS (OU-3) to Agencies
June 12, 2008	Submit Monthly Progress Report
June 30, 2008	Received approval of Final FS (OU-3)
July 7, 2008	Submit Monthly Progress Report
July 14 – Aug. 13, 2008	Public comment period (OU-3/PRAP)
July 31, 2008	Public Meeting (OU-3/PRAP)
Aug. 28, 2008	Submit Monthly Progress Report

DATE	TASK/ACTIVITY/DELIVERABLE/MILESTONE
Sept 11, 2008	Submit Monthly Progress Report
Sept 24, 2008	OU-3 Record of Decision signed by agency
Oct 28, 2008	Submit Monthly Progress Report

NEASE CHEMICAL SITE, SALEM, OHIO
REMOVAL ACTION
MONTHLY PROGRESS REPORT
SEPTEMBER 2008

1.0 INTRODUCTION

This progress report has been prepared in accordance with Paragraph 14 of the "Order" section of the Administrative Order by Consent (AOC) Docket No. V-W-94-C-212, effective November 17, 1993 regarding a Removal Action for the Nease Chemical Site in Salem, Ohio. The report summarizes the major activities during the month along with investigation results and any problems encountered on the project. Activities planned for next month are also presented.

2.0 SUMMARY OF ACTIVITIES PERFORMED

2.1 PROJECT ACTIVITY

The activities that were initiated and/or completed during this month are described below. Activities were performed in accordance with the Removal Action AOC.

Ohio EPA performed a RCRA Site inspection during this month. The inspection from OEPA was received with a letter dated June 20, 2008.

The removal of an old metal tank and a plastic container was conducted in the last week of August. The disposal of the recovered sediments as well as the soil recovered during the PDI drench work was scheduled for the beginning of October.

2 2 WORK PLAN PREPARATION/REPORTS

None

2.3 FIELDWORK

2.3.1 SITE INSPECTIONS

The results of the monthly site inspection carried out at the site on September 30, 2008 are shown in Attachment 1.

2.3 2 MONTHLY WATER LEVEL MEASUREMENTS

The next water level monitoring in wells will occur in November 2008.

2.3.3 TREATMENT PLANT OPERATION

The treatment plant operated mostly normal throughout the month.

2.4.1.1 MEETINGS

None

3.0 VARIATIONS FROM THE APPROVED REMOVAL ACTION WORK PLAN

None

4.0 RESULTS OF INSPECTIONS, ENVIRONMENTAL SAMPLING, TESTS AND ANALYSES

Water monitoring samples were collected from the treatment plant on September 2 and 9, 2008 (Attachments 2 and 3). The acute and chronic testing was performed during August 2008 (Attachments 4 and 5).

5.0 PROJECT SCHEDULE

None

6.0 DIFFICULTIES ENCOUNTERED AND ACTION TAKEN TO RESOLVE PROBLEMS

None

7.0 PERSONNEL CHANGES

None.

8.0 TYPES AND QUANTITIES OF REMOVED MATERIALS

For the period from September 1 through 30, 2008 the following material was removed:

- 5,200 gallons of leachate and/or backwash water were disposed off-site at a licensed treatment facility.
- Approximately 102,178 gallons were pumped from Leachate Collection System 1 (LCS-1) (total for LCS-1 =21,927,654 gal).
- 4,237 gallons were pumped from Leachate Collection System 2 (LCS-2) (total for LCS-2 = 1,740,203 gal).
- 2,724 gallons of water were pumped from Pond 1 (total for the pond = 1,032,670 gallons).
- Approximately 8.5 pounds of organic compounds were removed during pumping (estimate based on average VOC/SVOC concentrations for each source).

9.0 ANTICIPATED PROJECT ACTIVITIES FOR OCTOBER 2008

Removal Action activities scheduled for the upcoming month include on-going implementation of the approved Removal Action Work Plan involving:

- Collection of groundwater from the existing collection systems LCS-1, LCS-2 and Pond 1
- Monthly Progress Report for September 2008
- Tank Removal – Disposal of recovered sediments.

102808

TABLE 1
NEASE CHEMICAL SITE, SALEM, OHIO
REMOVAL ACTION SCHEDULE

DATE	TASK/ACTIVITY/DELIVERABLE/MILESTONE
	Documentation of the Site Activities through July 31, 2004 can be reviewed in the July 2004 Monthly Progress Report
September 9, 2004	Submit Monthly Progress Report
October 8, 2004	Submit Monthly Progress Report
November 10, 2004	Submit Monthly Progress Report
December 10, 2004	Submit Monthly Progress Report
January 10, 2005	Submit Monthly Progress Report
February 10, 2005	Submit Monthly Progress Report
March 4, 2005	Submit Monthly Progress Report
April 8, 2005	Submit Monthly Progress Report
May 9, 2005	Submit Monthly Progress Report
June 9, 2005	Submit Monthly progress Report
July 8, 2005	Submit Monthly Progress Report
August 10, 2005	Submit Monthly Progress Report
September 9, 2005	Submit Monthly Progress Report
October 10, 2005	Submit Monthly Progress Report
November 9, 2005	Submit Monthly Progress Report
December 8, 2005	Submit Monthly Progress Report
January 9, 2006	Submit Monthly Progress Report
February 8, 2006	Submit Monthly Progress Report
March 15, 2006	Submit Monthly Progress Report
April 10, 2006	Submit Monthly Progress Report
May 8, 2006	Submit Monthly Progress Report
June 8, 2006	Submit Monthly Progress Report
July 10, 2006	Submit Monthly Progress Report
August 4, 2006	Submit Monthly Progress Report
September 8, 2006	Submit Monthly Progress Report
October 8, 2006	Submit Monthly Progress Report
November 6, 2006	Submit Monthly Progress Report
December 12, 2006	Submit Monthly Progress Report
January 8, 2007	Submit Monthly Progress Report
February 6, 2007	Submit Monthly Progress Report
March 19, 2007	Submit Monthly Progress Report
April 4, 2007	Submit Monthly Progress Report
May 21, 2007	Submit Monthly Progress Report

DATE	TASK/ACTIVITY/DELIVERABLE/MILESTONE
June 7, 2007	Submit Monthly Progress Report
July 6, 2007	Submit Monthly Progress Report
July 2-14, 2007	Implement Treatment Plant Modifications
August 7, 2007	Submit Monthly Progress Report
Sept. 14, 2007	Submit Monthly Progress Report
October 5, 2004	Submit Monthly Progress Report
November 7, 2007	Submit Monthly Progress Report
December 21, 2007	Submit Monthly Progress Report
January 3, 2008	Submit Monthly Progress Report
February 7, 2008	Submit Monthly Progress Report
March 3, 2008	Submit Monthly Progress Report
April 8, 2008	Submit Monthly Progress Report
May 7, 2008	Submit Monthly Progress Report
June 12, 2008	Submit Monthly Progress Report
July 7, 2008	Submit Monthly Progress Report
Aug. 28, 2008	Submit Monthly Progress Report
Sept. 11, 2008	Submit Monthly Progress Report
October 28, 2008	Submit Monthly Progress Report

ATTACHMENT 1

RESULTS OF MONTHLY SITE INSPECTION
NEASE CHEMICAL SITE, SALEM, OHIO
SEPTEMBER 2008

SITE INSPECTION FORM
RUETGERS-NEASE CORPORATION
Nease Site, Salem, Ohio

Date of Inspection: 9-30-08

Entry Time: 8:30 Hrs. Exit Time: 1030 Hrs

Weather: Cloudy 62°

Inspector's Name: Dennis L. Lane

Inspector's Company: Howells and Baird, Inc.

INSPECTION RESULTS

SPECIFIC OBSERVATIONS: Structures

(Responses: S = Satisfactory U = Unsatisfactory Yes/No Levels Measured in Feet, N/A = Not Applicable)

	Pump	Quick Connect	Water Level	Berm Erosion	Visible Leakage
Leachate Collection System 1 (LCS-1)	S	S	10.29	N/A	No
Leachate Collection System 2 (LCS-2)	S	S	11.65	N/A	No
Pond 1 Pumphouse	S	S	10.40	N/A	No
Pond 1 Berm	N/A	N/A	N/A	No	No
Pond 2 Embankment	N/A	N/A	N/A	No	No
Exclusion Area A Embankment	N/A	N/A	N/A	No	No
Storage Tank	N/A	S	3.16	N/A	No
Other (specify)					

SPECIFIC OBSERVATIONS: Sediment Barriers

Condition of Sediment Barriers

Barrier ID	Fabric Intact?	By Passing Evident?	Is Maintenance Necessary?
Sediment Control Structure 1	YES	No	No
Sediment Control Structure 2	YES	No	No
Fabric Barrier 2	YES	No	No
Fabric Barrier 3	YES	No	No
Fabric Barrier 4	YES	No	No
Fabric Barrier 5	YES	No	No
Fabric Barrier 8	YES	No	No
Fabric Barrier 9	YES	No	No
Fabric Barrier 10	YES	No	No
Rock Barrier 1	YES	No	No
Rock Barrier 2	YES	No	No
Pond 7 - North	YES	No	No
Pond 7 - South	YES	No	No

SPECIFIC OBSERVATIONS: Seeps (if present, use more forms, as necessary)

Seep ID (yr-month-#)	Located on Map	Areal Extent (ft 2)	Magnitude (flow?, ponding?)
94-7-1	YES	20	NON-FLOWING SEEP
96-8-2	YES	20	NON-FLOWING SEEP

Note Seep ID # equal the "nth' observed seep during the yr-month in question

ADDITIONAL OBSERVATION OR REMARKS:

Inspector's Name: DENNIS L. LANE

Inspector's Signature: Dennis L. Lane

Date: 9-30-08

ATTACHMENT 2

WATER SAMPLING RESULTS – SEPTEMBER 2, 2008
NEASE CHEMICAL SITE, SALEM, OHIO

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

SALEM, OHIO SITE

Lot #: A8I030143

Dr. Rainer Domalski

Rutgers Organics Corporation
201 Struble Road
State College, PA 16801

TESTAMERICA LABORATORIES, INC.

Kenneth J. Kuzior
Project Manager

September 16, 2008

SAMPLE SUMMARY

A8I030143

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
KV6TG	001	INFLUENT	09/02/08	13:00
KV6T3	002	OUTFALL	09/02/08	13:00

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages
- All calculations are performed before rounding to avoid round-off errors in calculated results
- Results noted as "ND" were not detected at or above the stated limit
- *This report must not be reproduced, except in full, without the written approval of the laboratory*
- Results for the following parameters are never reported on a dry weight basis color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight

Rutgers Organics Corporation

Client Sample ID: INFLUENT

General Chemistry

Lot-Sample #...: A8I030143-001 Work Order #...: KV6TG Matrix.....: WG
Date Sampled...: 09/02/08 13:00 Date Received..: 09/03/08

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate as N	ND	0.10	mg/L	MCAWW 300.0A	09/03/08	8248085
	Dilution Factor: 1					
Nitrite as N	ND	0.10	mg/L	MCAWW 300.0A	09/03/08	8248084
	Dilution Factor 1					
Nitrogen, as Ammonia	ND	2.0	mg/L	MCAWW 350.2	09/09/08	8253395
	Dilution Factor: 1					
Total phosphorus	ND	0.1	mg/L	MCAWW 365.2	09/12/08	8256459
	Dilution Factor 1					

Rutgers Organics Corporation

Client Sample ID: OUTFALL

General Chemistry

Lot-Sample #...: A8I030143-002 Work Order #...: KV6T3 Matrix.....: WG
Date Sampled...: 09/02/08 13:00 Date Received..: 09/03/08

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate as N	ND	0.10	mg/L	MCAWW 300.0A	09/03/08	8248085
		Dilution Factor 1				
Nitrite as N	ND	0.10	mg/L	MCAWW 300.0A	09/03/08	8248084
		Dilution Factor: 1				
Nitrogen, as Ammonia	ND	2.0	mg/L	MCAWW 350.2	09/09/08	8253395
		Dilution Factor: 1				
Total phosphorus	ND	0.1	mg/L	MCAWW 365.2	09/12/08	8256459
		Dilution Factor: 1				

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

QUALITY CONTROL SECTION

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4142 (0408)

Client	Project Manager	Date	Chain of Custody Number
Rutgers Organics Corp.	Dr. Rainer Domalski	9-2-08	008088
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
201 Struble Road	(814) 231-9200 (814) 238-1567		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
State College / PA / 16801	Denny Lane		
Project Name and Location (State)	**Carrier/Waybill Number**		
Salem, OHIO SITE			
Contract/Purchase Order/Quote No.			

Sample I.D. No and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Analysis: Nitrate, Nitrite	NH3, Phosphorus	Special Instructions/ Conditions of Receipt
Influent	9-2-08	1300		X			X						1		
Outfall	9-2-08	1300		X			X						1		
Influent	9-2-08	1300		X				X						1	
Outfall	9-2-08	1300		X				X						1	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1 Relinquished By: Gerald Wilhelm	9-2-08	1500	1 Received By: [signature] TEST AMERICA	3 SEP 08	0930
2 Relinquished By			2 Received By		
3 Relinquished By			3 Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report, CANARY - Stays with the Sample, PINK - Field Copy

North Canton

ATTACHMENT 3

WATER SAMPLING RESULTS – SEPTEMBER 16, 2008
NEASE CHEMICAL SITE, SALEM, OHIO

TESTAMERICA LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Rutgers Organics Corporation
SALEM, OHIO SITE

Lot #: A8I170124 Date Reported: 10/27/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Client Sample ID: INFLUENT				
Sample #: 001 Date Sampled: 09/16/08 13:00 Date Received: 09/17/08 Matrix: WATER				
Inorganic Analysis				Reviewed
pH Aqueous	**7.0**		**No Units**	**SW846 9040B**
Filterable Residue (TDS)	**440**	**10**	**mg/L**	**MCAWW 160.1**
Non-Filterable Residue (TSS)	**21**	**4.0**	**mg/L**	**MCAWW 160.2**
Client Sample ID: LGAC 2-3				
Sample #: 002 Date Sampled: 09/16/08 13:00 Date Received: 09/17/08 Matrix: WATER				
Volatile Organics by GC/MS				Reviewed
Acetone	ND	10	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	10	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	**0.26 J**	**1.0**	**ug/L**	**SW846 8260B**
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

TESTAMERICA LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: A8I170124 SALEM, OHIO SITE Date Reported: 10/27/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Client Sample ID: LGAC 2-3				
Sample #: 002 Date Sampled: 09/16/08 13:00 Date Received: 09/17/08 Matrix: WATER				
Volatile Organics by GC/MS				Reviewed
cis-1,2-Dichloroethene	**0.37 J**	**1.0**	**ug/L**	**SW846 8260B**
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B

J Estimated result Result is less than RL.

Inorganic Analysis				Reviewed
pH Aqueous	**8.0**		**No Units**	**SW846 9040B**
Filterable Residue (TDS)	**440**	**10**	**mg/L**	**MCAWW 160.1**
Non-Filterable Residue (TSS)	ND	4.0	mg/L	MCAWW 160.2

(Continued on next page)

TESTAMERICA LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

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Rutgers Organics Corporation

Lot #: A8I170124 SALEM, OHIO SITE Date Reported: 10/27/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
Client Sample ID: OUTFALL					
Sample #: 003 Date Sampled: 09/16/08 13:00 Date Received: 09/17/08 Matrix: WATER					
Mercury in Liquid Waste (Manual Cold-Vapor)					Reviewed
Mercury	ND	0.00020	mg/L	SW846 7470A	
ICP-MS (6020)					Reviewed
Silver	ND	0.0010	mg/L	SW846 6020	
Aluminum	ND	0.050	mg/L	SW846 6020	
Arsenic	**0.0027**	**0.0010**	**mg/L**	**SW846 6020**	
Beryllium	ND	0.0010	mg/L	SW846 6020	
Cadmium	ND	0.0010	mg/L	SW846 6020	
Chromium	ND	0.0020	mg/L	SW846 6020	
Copper	ND	0.0020	mg/L	SW846 6020	
Iron	**1.0**	**0.050**	**mg/L**	**SW846 6020**	
Nickel	**0.0025**	**0.0020**	**mg/L**	**SW846 6020**	
Lead	ND	0.0010	mg/L	SW846 6020	
Antimony	ND	0.0020	mg/L	SW846 6020	
Thallium	ND	0.0010	mg/L	SW846 6020	
Zinc	ND	0.010	mg/L	SW846 6020	
Volatile Organics by GC/MS					Reviewed
Acetone	**1.1 J**	**10**	**ug/L**	**SW846 8260B**	
Benzene	ND	1.0	ug/L	SW846 8260B	
Bromobenzene	ND	1.0	ug/L	SW846 8260B	
Bromochloromethane	ND	1.0	ug/L	SW846 8260B	
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B	
Bromoform	ND	1.0	ug/L	SW846 8260B	
Bromomethane	ND	1.0	ug/L	SW846 8260B	
2-Butanone	ND	10	ug/L	SW846 8260B	
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B	
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B	
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B	
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B	
Chlorobenzene	ND	1.0	ug/L	SW846 8260B	
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B	
Chloroethane	ND	1.0	ug/L	SW846 8260B	
Chloroform	ND	1.0	ug/L	SW846 8260B	
Chloromethane	ND	1.0	ug/L	SW846 8260B	
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B	

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TESTAMERICA LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

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Rutgers Organics Corporation
Lot #: A8I170124 SALEM, OHIO SITE Date Reported: 10/27/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Client Sample ID: OUTFALL				
Sample #: 003 Date Sampled: 09/16/08 13:00 Date Received: 09/17/08 Matrix: WATER				
Volatile Organics by GC/MS				Reviewed
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	**0.25 J**	**1.0**	**ug/L**	**SW846 8260B**
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	**0.35 J**	**1.0**	**ug/L**	**SW846 8260B**
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B

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TESTAMERICA LABORATORIES, INC.

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Lot #: A8I170124 SALEM, OHIO SITE Date Reported: 10/27/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
Client Sample ID: OUTFALL					
Sample #: 003 Date Sampled: 09/16/08 13:00 Date Received: 09/17/08 Matrix: WATER					
Volatile Organics by GC/MS					Reviewed
o-Xylene	ND	1.0	ug/L	SW846 8260B	
J Estimated result Result is less than RL					
Semivolatile Organic Compounds by GC/MS					In Review
Anthracene	ND	10	ug/L	SW846 8270C	
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C	
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C	
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C	
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C	
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C	
Butyl benzyl phthalate	ND	10	ug/L	SW846 8270C	
Chrysene	ND	10	ug/L	SW846 8270C	
Dibenz(a,h)anthracene	ND	10	ug/L	SW846 8270C	
Di-n-butyl phthalate	ND	10	ug/L	SW846 8270C	
1,2-Dichlorobenzene	ND	10	ug/L	SW846 8270C	
1,3-Dichlorobenzene	ND	10	ug/L	SW846 8270C	
1,4-Dichlorobenzene	ND	10	ug/L	SW846 8270C	
Dimethyl phthalate	ND	10	ug/L	SW846 8270C	
Fluorene	ND	10	ug/L	SW846 8270C	
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C	
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C	
4-Methylphenol	ND	10	ug/L	SW846 8270C	
Naphthalene	ND	10	ug/L	SW846 8270C	
Phenanthrene	ND	10	ug/L	SW846 8270C	
Phenol	ND	10	ug/L	SW846 8270C	
Pyrene	ND	10	ug/L	SW846 8270C	
Phenyl sulfone	ND	2.0	ug/L	SW846 8270C	
3,4-Dichloronitrobenzene	ND	10	ug/L	SW846 8270C	
Organochlorine Pesticides					Reviewed
Methoxychlor	ND	0.10	ug/L	SW846 8081A	

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TESTAMERICA LABORATORIES, INC.

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Lot #: A8I170124 SALEM, OHIO SITE Date Reported: 10/27/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Client Sample ID: OUTFALL				
Sample #: 003 Date Sampled: 09/16/08 13:00 Date Received: 09/17/08 Matrix: WATER				
Inorganic Analysis				Reviewed
Biochemical Oxygen Demand	ND	2	mg/L	MCAWW 405.1
Weak Acid Dissociable CN	ND	0.010	mg/L	SM18 4500-CN-I
Chemical Oxygen Demand	ND	20	mg/L	MCAWW 410.4
N-Hexane Extractable Material (1664A)	ND	5.0	mg/L	CFR136A 1664A HEM
Ammonia Nitrogen	ND	2.0	mg/L	MCAWW 350.2
pH Aqueous	**8.0**		**No Units**	**SW846 9040B**
Filterable Residue (TDS)	**460**	**10**	**mg/L**	**MCAWW 160.1**
Total Organic Carbon	ND	1	mg/L	SW846 9060
Non-Filterable Residue (TSS)	ND	4.0	mg/L	MCAWW 160.2
Client Sample ID: TRIP BLANK				
Sample #: 004 Date Sampled: 09/16/08 13:00 Date Received: 09/17/08 Matrix: WATER				
Volatile Organics by GC/MS				Reviewed
Acetone	**2.3 J**	**10**	**ug/L**	**SW846 8260B**
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	10	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B

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TESTAMERICA LABORATORIES, INC.

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Lot #: A8I170124 SALEM, OHIO SITE Date Reported: 10/27/08

Client Sample ID: TRIP BLANK
Sample #: 004 Date Sampled: 09/16/08 13:00 Date Received: 09/17/08 Matrix: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
Volatile Organics by GC/MS					Reviewed
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B	
Dibromomethane	ND	1.0	ug/L	SW846 8260B	
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B	
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B	
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B	
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B	
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B	
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B	
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B	
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B	
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B	
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B	
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
Ethylbenzene	ND	1.0	ug/L	SW846 8260B	
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B	
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B	
Methylene chloride	ND	1.0	ug/L	SW846 8260B	
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B	
Styrene	ND	1.0	ug/L	SW846 8260B	
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B	
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B	
Toluene	ND	1.0	ug/L	SW846 8260B	
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B	
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B	
Trichloroethene	ND	1.0	ug/L	SW846 8260B	
Trichlorofluoromethane	**1.4**	**1.0**	**ug/L**	**SW846 8260B**	
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B	
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B	
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B	
Vinyl chloride	ND	1.0	ug/L	SW846 8260B	
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B	
o-Xylene	ND	1.0	ug/L	SW846 8260B	

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TESTAMERICA LABORATORIES, INC.

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Lot #: A8I170124 SALEM, OHIO SITE Date Reported: 10/27/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Client Sample ID: TRIP BLANK				
Sample #: 004 Date Sampled: 09/16/08 13:00 Date Received: 09/17/08 Matrix: WATER				
Volatile Organics by GC/MS				Reviewed
Benzene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Bromodichloromethane	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Bromoform	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Carbon tetrachloride	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Chlorobenzene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Dibromochloromethane	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Chloroethane	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Chloroform	ND	0.50	ppb(v/v)	EPA-2 TO-14A
1,2-Dibromoethane (EDB)	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Dibromomethane	ND	1.0	ppb(v/v)	EPA-2 TO-14A
1,2-Dichlorobenzene	**1.0**	**0.50**	**ppb(v/v)**	**EPA-2 TO-14A**
1,3-Dichlorobenzene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
1,4-Dichlorobenzene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Dichlorodifluoromethane	ND	0.50	ppb(v/v)	EPA-2 TO-14A
1,1-Dichloroethane	ND	0.50	ppb(v/v)	EPA-2 TO-14A
1,2-Dichloroethane	ND	0.50	ppb(v/v)	EPA-2 TO-14A
cis-1,2-Dichloroethene	**1.1**	**0.50**	**ppb(v/v)**	**EPA-2 TO-14A**
trans-1,2-Dichloroethene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
1,1-Dichloroethene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
1,2-Dichloropropane	ND	0.50	ppb(v/v)	EPA-2 TO-14A
cis-1,3-Dichloropropene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
trans-1,3-Dichloropropene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Ethylbenzene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Cumene	ND	1.0	ppb(v/v)	EPA-2 TO-14A
n-Propylbenzene	ND	1.0	ppb(v/v)	EPA-2 TO-14A
Styrene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
1,1,2,2-Tetrachloroethane	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Tetrachloroethene	**1.0**	**0.50**	**ppb(v/v)**	**EPA-2 TO-14A**
Toluene	**0.59**	**0.50**	**ppb(v/v)**	**EPA-2 TO-14A**
Client Sample ID: AGAC 1-2				
Sample #: 005 Date Sampled: 09/16/08 13:00 Date Received: 09/17/08 Matrix: AIR				
Volatile Organics by TO14 A (Low Level)				Reviewed
Benzene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Bromodichloromethane	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Bromoform	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Carbon tetrachloride	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Chlorobenzene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Dibromochloromethane	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Chloroethane	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Chloroform	ND	0.50	ppb(v/v)	EPA-2 TO-14A
1,2-Dibromoethane (EDB)	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Dibromomethane	ND	1.0	ppb(v/v)	EPA-2 TO-14A
1,2-Dichlorobenzene	**1.0**	**0.50**	**ppb(v/v)**	**EPA-2 TO-14A**
1,3-Dichlorobenzene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
1,4-Dichlorobenzene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Dichlorodifluoromethane	ND	0.50	ppb(v/v)	EPA-2 TO-14A
1,1-Dichloroethane	ND	0.50	ppb(v/v)	EPA-2 TO-14A
1,2-Dichloroethane	ND	0.50	ppb(v/v)	EPA-2 TO-14A
cis-1,2-Dichloroethene	**1.1**	**0.50**	**ppb(v/v)**	**EPA-2 TO-14A**
trans-1,2-Dichloroethene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
1,1-Dichloroethene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
1,2-Dichloropropane	ND	0.50	ppb(v/v)	EPA-2 TO-14A
cis-1,3-Dichloropropene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
trans-1,3-Dichloropropene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Ethylbenzene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Cumene	ND	1.0	ppb(v/v)	EPA-2 TO-14A
n-Propylbenzene	ND	1.0	ppb(v/v)	EPA-2 TO-14A
Styrene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
1,1,2,2-Tetrachloroethane	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Tetrachloroethene	**1.0**	**0.50**	**ppb(v/v)**	**EPA-2 TO-14A**
Toluene	**0.59**	**0.50**	**ppb(v/v)**	**EPA-2 TO-14A**

J Estimated result Result is less than RL

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TESTAMERICA LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

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Lot #: A8I170124 SALEM, OHIO SITE Date Reported: 10/27/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Client Sample ID: AGAC 1-2				
Sample #: 005 Date Sampled: 09/16/08 13:00 Date Received: 09/17/08 Matrix: AIR				
Volatile Organics by TO14 A (Low Level)				Reviewed
1,1,1-Trichloroethane	ND	0.50	ppb(v/v)	EPA-2 TO-14A
1,1,2-Trichloroethane	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Trichloroethene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Trichlorofluoromethane	ND	0.50	ppb(v/v)	EPA-2 TO-14A
1,2,3-Trichloropropane	ND	1.2	ppb(v/v)	EPA-2 TO-14A
1,3,5-Trimethylbenzene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Vinyl chloride	ND	0.50	ppb(v/v)	EPA-2 TO-14A
m-Xylene & p-Xylene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
o-Xylene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Client Sample ID: AGAC-F				
Sample #: 006 Date Sampled: 09/16/08 13:00 Date Received: 09/17/08 Matrix: AIR				
Volatile Organics by TO14 A (Low Level)				Reviewed
Benzene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Bromodichloromethane	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Bromoform	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Carbon tetrachloride	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Chlorobenzene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Dibromochloromethane	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Chloroethane	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Chloroform	ND	0.50	ppb(v/v)	EPA-2 TO-14A
1,2-Dibromoethane (EDB)	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Dibromomethane	ND	1.0	ppb(v/v)	EPA-2 TO-14A
1,2-Dichlorobenzene	**5.0**	**0.50**	**ppb(v/v)**	**EPA-2 TO-14A**
1,3-Dichlorobenzene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
1,4-Dichlorobenzene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
Dichlorodifluoromethane	ND	0.50	ppb(v/v)	EPA-2 TO-14A
1,1-Dichloroethane	ND	0.50	ppb(v/v)	EPA-2 TO-14A
1,2-Dichloroethane	ND	0.50	ppb(v/v)	EPA-2 TO-14A
cis-1,2-Dichloroethene	**1.1**	**0.50**	**ppb(v/v)**	**EPA-2 TO-14A**
trans-1,2-Dichloroethene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
1,1-Dichloroethene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
1,2-Dichloropropane	ND	0.50	ppb(v/v)	EPA-2 TO-14A
cis-1,3-Dichloropropene	ND	0.50	ppb(v/v)	EPA-2 TO-14A
trans-1,3-Dichloropropene	ND	0.50	ppb(v/v)	EPA-2 TO-14A

(Continued on next page)

TESTAMERICA LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Rutgers Organics Corporation
Lot #: A8I170124 SALEM, OHIO SITE Date Reported: 10/27/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
Client Sample ID: AGAC-F					
Sample #: 006 Date Sampled: 09/16/08 13:00 Date Received: 09/17/08 Matrix: AIR					
Volatile Organics by TO14 A (Low Level)					Reviewed
Ethylbenzene	ND	0.50	ppb(v/v)	EPA-2 TO-14A	
Cumene	ND	1.0	ppb(v/v)	EPA-2 TO-14A	
n-Propylbenzene	ND	1.0	ppb(v/v)	EPA-2 TO-14A	
Styrene	ND	0.50	ppb(v/v)	EPA-2 TO-14A	
1,1,2,2-Tetrachloroethane	ND	0.50	ppb(v/v)	EPA-2 TO-14A	
Tetrachloroethene	**1.0**	**0.50**	**ppb(v/v)**	**EPA-2 TO-14A**	
Toluene	**0.58**	**0.50**	**ppb(v/v)**	**EPA-2 TO-14A**	
1,1,1-Trichloroethane	ND	0.50	ppb(v/v)	EPA-2 TO-14A	
1,1,2-Trichloroethane	ND	0.50	ppb(v/v)	EPA-2 TO-14A	
Trichloroethene	ND	0.50	ppb(v/v)	EPA-2 TO-14A	
Trichlorofluoromethane	ND	0.50	ppb(v/v)	EPA-2 TO-14A	
1,2,3-Trichloropropane	ND	1.2	ppb(v/v)	EPA-2 TO-14A	
1,3,5-Trimethylbenzene	ND	0.50	ppb(v/v)	EPA-2 TO-14A	
Vinyl chloride	ND	0.50	ppb(v/v)	EPA-2 TO-14A	
m-Xylene & p-Xylene	ND	0.50	ppb(v/v)	EPA-2 TO-14A	
o-Xylene	ND	0.50	ppb(v/v)	EPA-2 TO-14A	

ATTACHMENT 4

TWO ACUTE TOXICITY EVALUATIONS
AUGUST 19 THROUGH AUGUST 26, 2008
NEASE CHEMICAL SITE, SALEM, OHIO

RESULTS OF TWO ACUTE TOXICITY EVALUATIONS OF RUTGERS ORGANICS CORPORATION, SALEM SITE LAGOON WATER TREATMENT PLANT FINAL EFFLUENT

AAT JOB # 51 - 01 – 86

August 19 – August 26, 2008

Report Prepared for:

Rutgers Organics Corporation
201 Struble Road
State College, Pennsylvania 16801

Report Prepared by:

AMERICAN AQUATIC TESTING, INC.
890 NORTH GRAHAM STREET
ALLENTOWN, PENNSYLVANIA 18109

INTRODUCTION

A set of two static acute toxicity tests were conducted with larval fathead minnows, *Pimephales promelas* (*P. promelas*) and the freshwater cladoceran, *Ceriodaphnia dubia* (*C. dubia*) to determine the relative toxicity of final effluent from the Rutgers Organics Corporation Lagoon Water Treatment Plant, Salem, Ohio. The 96-hour static fathead acute toxicity test and the 48-hour static *C. dubia* acute toxicity tests were conducted from August 19 through August 23 2008. The toxicity evaluations were conducted by American Aquatic Testing, Inc., Allentown, Pennsylvania.

All tests were performed according to procedures outlined in Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, 4th Edition (EPA/600/4-90/027F) and Reporting and Testing Guidance for Biomonitoring Required by the Ohio Environmental Protection Agency, October 1991.

MATERIALS

TEST ORGANSIMS Fathead Minnow, *Pimephales promelas*

Larval fathead minnows used in acute testing were obtained from in-house cultures maintained by ABS,Inc.. Test age organisms are maintained in shallow depth basins containing 10L of moderately hard reconstituted water and are fed newly hatched *Artemia* (brine shrimp) nauplii twice a day up until test initiation. The test organisms were 01 day old at test initiation. No acclimation of these test organisms was required as they were raised in moderately hard reconstituted water, which was used for testing.

Freshwater Cladoceran, *Ceriodaphnia dubia*

Cladoceran neonates, *C. dubia* were obtained from AAT, Inc.'s in-house cultures. Cultures for generating test age (<24 hours old) neonates are maintained as single cultures in 30 mL soufflé cups containing 15 mL of moderately hard reconstituted water. These adults are transferred daily into fresh culture water and are fed a combination of a unicellular green alga (*Selenastrum capricornutum*) and a yeast/Cerophyll/trout chow (YCT) suspension. Broods released during a five hour period were pooled and used to initiate the acute toxicity test. No acclimation of these test organisms was required as they were raised in moderately hard reconstituted water, which was used for testing. Neonates were released between 0800 and 1300 of August 19, 2008.

DILUTION WATER

Moderately hard reconstituted water was prepared in accordance to procedures outlined in EPA/600/4-90/027F and was used as dilution/control water for the toxicity tests. Deionized water (Specialty Filtration Products) and reagent grade chemicals were used to achieve the following concentrations: 96 mg/L of $NaHCO_3$, 60.0 mg/L of $MgSO_4$ and 4.0 mg/L of KCl and 60.0mg/L of $CaSO_4$ $2H_2O$.

TEST MATERIAL

The material tested was final effluent collected by Howells and Baird personnel with a grab sampler placed at the outfall. One grab sample was collected for each of the two acute toxicity tests. The sample, collected August 18, 2008, was shipped overnight to AAT, Inc. in a cooler containing ice and was used to initiate testing on August 19, 2008. A Chain-of-Custody accompanied the sample. Tests were initiated prior to the expiration of the 36-hour holding time.

METHODS

P. promelas larvae (1 day old) were exposed to the effluent sample for 96 hours under static, non-renewal conditions. Test organisms were exposed in groups of 10 in 1 L glass beakers containing 500 mL of test solution with two replicates per concentration (20 organisms per concentration). The test organisms were fed prior to test initiation and at 48 hours.

C. dubia neonates (<24 hours old) were exposed to the effluent sample for 48 hours under static non-renewal conditions. Test organisms were exposed in groups of five in 30 mL soufflé cups containing 15 mL of test solution with four replicates per concentration (20 organisms per concentration). The test organisms were not fed during the test exposure.

Both sets of test chambers were placed in randomized positions in a temperature controlled environment maintained at 25 $\pm$ 1 ° C. The highest concentration used for exposure was 100 %. A 0.56 dilution schedule was used to prepare sample concentrations of 56%, 32%, 18% and 10%, by volume. A control sample consisting of 100 % dilution water was also tested.

Surviving test organisms were counted daily. Dead test organisms and debris were removed daily at this time. Temperature was measured daily in a surrogate replicate placed alongside the test chambers. Dissolved oxygen, pH and conductivity were measured in one replicate chamber at each concentration at the beginning and end of the test exposure. Alkalinity and hardness were measured in the control and the 100% concentration at the beginning of the test exposure. The lighting regime was 16 hours light, 08 hours dark.

RESULTS

FATHEAD MINNOW 96-HOUR ACUTE TEST RESULTS

As a result of less than 50 % mortality in any test concentration during the exposure period the acute data was evaluated visually. Therefore, the 96-hour LC_{50} is > 100%. This result yields an Acute Toxic Unit; TUa ($100\%/LC_{50}$) of 1.0.

CERIODAPHNIA DUBIA 48-HOUR ACUTE TEST RESULTS

As a result of less than 50 % mortality in any test concentration during the exposure period the acute data was evaluated visually. Therefore, the 48-hour LC_{50} is > 100%. This result yields an Acute Toxic Unit; TUa ($100\%/LC_{50}$) of 1.0.

Table I. Fathead Minnow Mortality Data

CLIENT: Rutgers Organics Corp., Salem Lagoon Water Treatment Plant
TEST: 96-hour Definitive Acute Toxicity Test
DATE: August 19 – August 23, 2008

Sample Type	% Effluent	# of Organisms	Cumulative number of organisms affected at 24 hr	48 hr	72 hr	96 hr	% Mortality*
Final Effluent	0	20	0	0	0	0	0
	10	20	0	0	0	0	0
	18	20	0	0	0	0	0
	32	20	0	0	0	0	0
	56	20	0	0	0	0	0
	100	20	0	0	0	0	0

* Cumulative Percent Mortality at 96 hours

Table II. Fathead Minnow Physical/Chemical Measurements

CLIENT: Rutgers Organics Corp., Salem Lagoon Water Treatment Plant
TEST: 96-hour Definitive Acute Toxicity Test
DATE: August 19 – August 23, 2008

	% Effluent by Volume					
Time	0	10	18	32	56	100
0 hour						
Conduct. µmhos	294	361	413	497	663	947
D.O. ppm	8.0	8.0	7.9	7.8	7.7	7.3
Temp. °C A	25.0	25.0	25.0	25.0	25.0	25.0
B	25.0	25.0	25.0	25.0	25.0	25.0
pH Std .units	8.2	8.2	8.1	8.1	8.0	7.9
Alkalinity mg/L	70					180
Hardness mg/L	90					430
24 hours A	25.0	25.0	25.0	25.0	25.0	25.0
Temp. °C B	25.0	25.0	25.0	25.0	25.0	25.0
48 hours A	24.5	24.5	24.5	24.5	24.5	24.5
Temp. °C B	24.5	24.5	24.5	24.5	24.5	24.5
72 hours A	25.0	25.0	25.0	25.0	25.0	25.0
Temp. °C B	25.0	25.0	25.0	25.0	25.0	25.0
96 hours						
Conduct. µmhos	317	379	432	530	685	934
D.O. ppm	7.3	7.3	7.2	7.2	7.3	7.2
pH Std .units	7.7	7.7	7.7	7.7	8.1	8.2
Temp. °C A	25.5	25.5	25.5	25.5	25.5	25.5
B	25.5	25.5	25.5	25.5	25.5	25.5

Table I. *Ceriodaphnia dubia* Mortality Data

CLIENT: Rutgers Organics Corp., Salem Lagoon Water Treatment Plant
TEST: 48 hour Definitive Acute Toxicity Test
DATE: August 19 – August 21, 2008

Sample Type	% Effluent	# of Organisms	Cumulative number of organism affected at 24 hours	48 hours	% Mortality*
Final Effluent	0	20	0	0	0
	10	20	0	0	0
	18	20	0	0	0
	32	20	0	0	0
	56	20	0	0	0
	100	20	0	1	5

* Cumulative Percent Mortality at 48 hours

Table II. *Ceriodaphnia dubia* Physical/Chemical Measurements

CLIENT: Rutgers Organics Corp., Salem Lagoon Water Treatment Plant
TEST: 48 hour Definitive Acute Toxicity Test
DATE: August 19 – August 21, 2008

	% Effluent by Volume					
Time	0	10	18	32	56	100
0 hour						
Conduct. µmhos	294	361	413	497	663	947
D.O. ppm	8.0	8.0	7.9	7.8	7.7	7.3
Temp. °C	25.0	25.0	25.0	25.0	25.0	25.0
pH Std .units	8.2	8.2	8.1	8.1	8.0	7.9
Alkalinity mg/L	70					180
Hardness mg/L	90					430
24 hours						
Temp. °C	25.0	25.0	25.0	25.0	25.0	25.0
48 hours						
Conduct. µmhos	327	392	444	531	689	971
D.O. ppm	7.9	7.9	7.9	7.9	7.9	8.0
pH Std .units	7.8	7.8	7.8	7.8	8.1	8.1
Temp. °C	25.0	25.0	25.0	25.0	25.0	25.0

APPENDIX I

RAW DATA

August 19 – August 23, 2008

RESULTS OF TWO ACUTE TOXICITY EVALUATIONS OF
RUTGERS ORGANICS CORPORATION,
SALEM SITE LAGOON WATER TREATMENT PLANT
FINAL EFFLUENT

Freshwater Acute Test

American Aquatic Testing, Inc.

Job #: 51-01-86 Start Date/Time: 8-19-08 1430

Species: P. promelas End Date/Time: 8-23-08 1430

Dilution Water: EPA Mod. Hard Test Type: 96hr. Static Non-renewal

Concentration	Rep.	Live Count					Temperature (C)				
		0 hr.	24 hr.	48 hr.	72 hr.	96 hr.	0 hr.	24 hr.	48 hr.	72 hr.	96 hr.
Control	A	10	10	10	10	10	25.0	25.0	24.5	25.0	25.5
	B	10	10	10	10	10	25.0	25.0	24.5	25.0	25.5
10%	A	10	10	10	10	10	25.0	25.0	24.5	25.0	25.5
	B	10	10	10	10	10	25.0	25.0	24.5	25.0	25.5
18%	A	10	10	10	10	10	25.0	25.0	24.5	25.0	25.5
	B	10	10	10	10	10	25.0	25.0	24.5	25.0	25.5
32%	A	10	10	10	10	10	25.0	25.0	24.5	25.0	25.5
	B	10	10	10	10	10	25.0	25.0	24.5	25.0	25.5
56%	A	10	10	10	10	10	25.0	25.0	24.5	25.0	25.5
	B	10	10	10	10	10	25.0	25.0	24.5	25.0	25.5
100%	A	10	10	10	10	10	25.0	25.0	24.5	25.0	25.5
	B	10	10	10	10	10	25.0	25.0	24.5	25.0	25.5
Initials		MKP	TRP	TRP	TRP	TRP	MKP	TRP	TRP	TRP	TRP
Date		8/19	5/20	5/21	5/22	5/23	8/19	8/20	8/21	8/22	8/23

Concentration	pH		D.O. (mg/L)		Cond. (umhos)	
	0 hr.	96 hr.	0 hr.	96 hr.	0 hr.	96 hr.
Control	8.2	7.7	8.0	7.3	294	317
10%	8.2	7.7	8.0	7.3	361	379
18%	8.1	7.7	7.9	7.2	413	432
32%	8.1	7.7	7.8	7.2	497	536
56%	8.0	8.1	7.7	7.3	663	685
100%	7.9	8.2	7.3	7.2	947	934
Initials	MKP	TRP	MKP	TRP	MKP	TRP
Date	8/19	8/23	8/19	8/23	8/19	8/23

Concentration	Alkalinity (mg/L)	Hardness (mg/L)
Control	70	90
100%	180	430
Initials	MKP	MKP
Date	8/19	8/19

Observations:

Freshwater Acute Test

American Aquatic Testing, Inc.

Job #: 51-01-86 Start Date/Time: 8-19-08 1600

Species: C. dubia End Date/Time: 8-21-08 1600

Dilution Water: EPA Mod. Hard Test Type: 48hr. SNR

Conc. %	Temperature (C) 0 hr.	24 hr.	48 hr.
Control	25.0	25.0	25.0
10	25.0	25.0	25.0
18	25.0	25.0	25.0
32	25.0	25.0	25.0
56	25.0	25.0	25.0
100	25.0	25.0	25.0
Conc. %	**pH (Stand units) 0 hr.**		**48 hr.**
Control	8.2		7.8
10	8.2		7.8
18	8.1		7.8
32	8.1		7.8
56	8.0		8.1
100	7.9		8.1
Conc.	**Dissolved Oxygen (mg/L)**		
Control	8.0		7.9
10	8.0		7.9
18	7.9		7.9
32	7.8		7.9
56	7.7		7.9
100	7.3		8.0
Conc.	**Conductivity (umhos)**		
Control	294		327
10	361		392
18	413		444
32	497		531
56	663		689
100	947		971
Initials	MLP	TAP	TAP
Date	8/19	8/20	8/21

Conc.	Alkalinity	Hardness
Control	70	90
100%	180	430
Initials	KDL	KDL
Date	8/19	8/19

Conc. %	Rep.	Live Count 0 hr.	24 hr.	48 hr.
Control	A	5	5	5
	B	5	5	5
	C	5	5	5
	D	5	5	5
10	A	5	5	5
	B	5	5	5
	C	5	5	5
	D	5	5	5
18	A	5	5	5
	B	5	5	5
	C	5	5	5
	D	5	5	5
32	A	5	5	5
	B	5	5	5
	C	5	5	5
	D	5	5	5
56	A	5	5	5
	B	5	5	5
	C	5	5	5
	D	5	5	5
100	A	5	5	5
	B	5	5	5
	C	5	5	5
	D	5	5	4
Initials		TAP	TAP	TAP
Date		8/19	8/20	8/21

Observations:

APPENDIX II

OHIO EPA NPDES BIOMONITORING REPORT FORM

Date Created: 04/13/98
Last Revised: 04/13/98

OHIO EPA NPDES BIOMONITORING REPORT FORM

GENERAL INFORMATION

1. Facility Name: Rutgers Organics Corporation
   Reporting Date: 30 May 2008

2. Address: 1224 Benton Road
   Salem, Ohio 44460

3. Ohio EPA Permit Number: Substantive Discharge Criteria 4. Application (NPDES) No.

5. Facility Contact: Ralph Pearce 6. Phone No.: (800) 458-3434

7. Consultant/Testing Lab Name: American Aquatic testing, Inc.

8. Consultant/Lab Contact: Chris Nally 9. Phone No.: (610) 434-9015

10. Receiving Water(s) of Discharge: Unnamed Tributary of the Middle Fork of Middle Creek.

11. Outfall(s) Tested: 001

    Average Daily Flows:
    on Day Sampled (gal/day)

12. Is your current Standard Operating Procedure (SOP) Manual on file with Ohio EPA? (Yes/No) No If yes, date submitted: _____. If no, an SOP that follows Ohio EPA and/or U.S. EPA protocols must be submitted as soon as possible in order to eliminate the need to include this information with every report.

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature

Christopher J. Nally, President

09/09/08
Date

ACUTE TOXICITY TEST SAMPLING DATA

TABLE

Sampling Summary for Acute Toxicity Tests

Sampling Location & Description	Sample Collection Beginning MM/DD/Time	Ending MM/DD/Time	Weather/Receiving Stream Conditions
Final Effluent:	08/18/08 1230	N/A	
Outfall No.: 001			
Type (Grab/Composite): Grab			
Volume Collected: 1.0-gallon			
Upstream Station:	N/A		
Waterbody:			
Station No.:			
Type (Grab/Composite):			
Volume Collected:			
Downstream Station (Near-field):	N/A		
Waterbody:			
Station No.:			
Type (Grab/Composite):			
Volume Collected:			
Additional Stations (If needed):	N/A		
Waterbody:			
Station No.:			
Type (Grab/Composite):			
Volume Collected:			
Waterbody:			
Station No.:			
Type (Grab/Composite):			
Volume Collected:			

TOXICITY TEST CONDITIONS

TABLE

Summary of Toxicity Test Conditions	
1. Test Species and Age:	*Pimephales promelas* - 1 days old
2. Test Type and Duration:	96-hour Static Acute
3. Test Dates:	August 19 - August 23, 2008
4. Test Temperature (°C):	25.0°C ± 1.0°C
5. Light Quality:	50-100 ft. candles
6. Photoperiod:	16 hours light / 8 hours dark
7. Feeding Regime:	None
8. Size of Test Vessel:	600 mL
9. Volume and Depth of Test Solutions:	500 mL / 92 mm
10. No. of Test Organisms per Test Vessel:	Ten
11. No. of Test Vessels per Test Solution:	Two
12. Total No. of Test Organisms per Test Solution:	20
13. Test Concentrations (as percent by volume effluent):	0, 10, 18, 32, 56, and 100%
14. Renewal of Test Solutions:	None
15. Dilution and Primary Control Water:	Moderately Hard Reconstituted Water
16. Secondary Control Water:	N/A
17. Aeration? Before/During Test:	None
18. Endpoints Measured:	LC_{50} and TU_a
19. If secondary control water used as diluent due to toxicity in primary control water, indicate number of consecutive tests conducted with alternative diluent:	N/A

ACUTE TOXICITY TEST RESULTS

TABLE

Results of a *Pimephales* (genus) *promelas* (species) 96-Hour Static Acute Toxicity Test

Conducted 08/19/08 (mm/dd/yy) - 08/23/08 (mm/dd/yy) Using Effluent from Outfall 001 (number).

Test Solutions	Cumulative Percent Mortality (Cumulative Percent Affected)[a] 24-Hr	48-Hr	72-Hr	96-Hr	LC_{50} Values (EC_{50} Values) 24-Hr	48-Hr	72-Hr	96-Hr
Primary Control/ Dilution Water	0	0	0	0	>100%	>100%	>100%	>100%
	(0)	(0)	(0)	(0)	(N/A)	(N/A)	(N/A)	(N/A)
Secondary Control	N/A				LC_{50} 95% Confidence Limits (EC_{50} 95% Confidence Limits)			
	( )	( )	( )	( )	24-Hr	48-Hr	72-Hr	96-Hr
10 % Effluent	0	0	0	0				
	(0)	(0)	(0)	(0)				
					LL N/A	N/A	N/A	N/A
18 % Effluent	0	0	0	1	UL N/A	N/A	N/A	N/A
	(0)	(0)	(0)	(5)				
32 % Effluent	0	0	0	0	LL (N/A)	( )	( )	( )
	(0)	(0)	(0)	(0)	UL (N/A)	( )	( )	( )
56 % Effluent	0	0	0	0	LL = Lower Limit UL = Upper Limit			
	(0)	(0)	(0)	(0)				
100 % Effluent	0	0	0	0	Calculated TU_a Value: 1.0			
	(0)	(0)	(0)	(0)				
Near-Field Sample	N/A				Method(s) Used to Determine LC_{50}, EC_{50}, and Confidence Limit Values:			
	( )	( )	( )	( )	Visual Inspection			

[a]-cumulative percent affected is the total percentage of test organisms observed dead, immotile, exhibiting loss of equilibrium, or other defined endpoints (specify below):

_____.

TOXICITY TEST CONDITIONS

TABLE

Summary of Toxicity Test Conditions

1. Test Species and Age:	*Ceriodaphnia dubia* - <24-hours old
2. Test Type and Duration:	48-hour Static Acute
3. Test Dates:	August 19 - August 21, 2008
4. Test Temperature (°C):	25.0°C ± 1°C
5. Light Quality:	50-100 ft candles
6. Photoperiod:	16 hours light / 8 hours dark
7. Feeding Regime:	None
8. Size of Test Vessel:	30 mL
9. Volume and Depth of Test Solutions:	25 mL / 20 mL
10. No. of Test Organisms per Test Vessel:	Five
11. No. of Test Vessels per Test Solution:	Four
12. Total No. of Test Organisms per Test Solution:	20
13. Test Concentrations (as percent by volume effluent):	0, 10, 18, 32, 56, and 100%
14. Renewal of Test Solutions:	None
15. Dilution and Primary Control Water:	Moderately Hard Reconstituted Water
16. Secondary Control Water:	N/A
17. Aeration? Before/During Test:	None
18. Endpoints Measured:	LC_{50} and TU_a
19. If secondary control water used as diluent due to toxicity in primary control water, indicate number of consecutive tests conducted with alternative diluent:	N/A

ATTACHMENT 5

TWO CHRONIC TOXICITY EVALUATIONS
AUGUST 19 THROUGH AUGUST 26, 2008
NEASE CHEMICAL SITE, SALEM, OHIO

RESULTS OF TWO CHRONIC TOXICITY EVALUATIONS OF RUTGERS ORGANICS CORPORATION, SALEM SITE LAGOON WATER TREATMENT PLANT FINAL EFFLUENT

AAT JOB # 51 - 01 - 86

August 19 – August 26, 2008

Report Prepared for:

Rutgers Organics Corporation
201 Struble Road
State College, Pennsylvania 16801

Report Prepared by:

AMERICAN AQUATIC TESTING, INC.
890 NORTH GRAHAM STREET
ALLENTOWN, PENNSYLVANIA 18109

INTRODUCTION

A set of two 7-day daily renewal chronic toxicity tests were conducted with larval fathead minnows, *Pimephales promelas* (*P. promelas*) and the freshwater cladoceran, *Ceriodaphnia dubia* (*C. dubia*) to determine the relative toxicity of final effluent from the Rutgers Organics Corporation Lagoon Water Treatment Plant, Salem, Ohio. The larval fathead survival and growth chronic test and the *C. dubia* survival and reproduction test were conducted from August 19 through August 26, 2008. The toxicity evaluations were conducted by American Aquatic Testing, Inc., Allentown, Pennsylvania.

All tests were performed according to procedures outlined in Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, 4th Edition (EPA/600/4-90/027F), Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms, Third Edition (EPA/600/4-19/002) and Reporting and Testing Guidance for Biomonitoring Required by the Ohio Environmental Protection Agency, October 1991.

MATERIALS

TEST ORGANSIMS Fathead Minnow, *Pimephales promelas*

Larval fathead minnows used in chronic testing were obtained from cultures maintained in house at ABS,Inc. Test age organisms are maintained in shallow depth basins containing 10L of moderately hard reconstituted water and are fed newly hatched *Artemia* (brine shrimp) nauplii twice a day up until test initiation. The test organisms were < 48 hours old at test initiation. No acclimation of these test organisms was required as they were raised in moderately hard reconstituted water, which was used for testing.

Freshwater Cladoceran, *Ceriodaphnia dubia*

Cladoceran neonates, C. dubia were obtained from AAT, Inc.'s in-house cultures. Cultures for generating test age (<24 hours old) neonates are maintained as single cultures in 30 mL soufflé cups containing 15 mL of moderately hard reconstituted water. These adults are transferred daily into fresh culture water and are fed a combination of a unicellular green alga (*Selenastrum capricornutum*) and a yeast/Cerophyll/trout chow (YCT) suspension. Broods released during an 8-hour period were pooled and used to initiate the chronic toxicity test. No acclimation of these test organisms was required as they were raised in moderately hard reconstituted water, which was used for testing. Neonates were released between 0800 and 1300 of August 19, 2008.

DILUTION WATER

Moderately hard reconstituted water was prepared in accordance to procedures outlined in EPA/600/4-90/027F and was used as dilution/control water for the toxicity tests. Deionized water (Specialty Filtration Products) and reagent grade chemicals were used to achieve the following concentrations: 96 mg/L of $NaHCO_3$, 60.0 mg/L of $MgSO_4$ and 4.0 mg/L of KCl and 60.0mg/L of $CaSO_4$ $2H_2O$.

TEST MATERIAL

The material tested was final effluent collected by Howells and Baird personnel with a grab sampler placed at the outfall. Three grab samples were collected for each of the two chronic toxicity tests.

The sample collected August 18, 2008 was used for the two chronic tests starting August 19, 2008 and for Day 2. The sample collected August 20, 2008 was used for renewal for Days 3 and 4. The sample collected August 22, 2008 was used for renewal for Days 5, 6 and 7. Chain-of-Custody forms accompanied the sample. Tests were initiated prior to the expiration of the 36-hour holding time.

METHODS

P promelas larvae (<48 hours old) were exposed to the effluent samples for seven days under static, daily renewal conditions. Test organisms were exposed in groups of 10 in 1 L glass beakers containing 500 mL of test solution with four replicates per concentration (40 organisms per concentration). The test organisms were fed twice each day with Artemia nauplii from test initiation until day six. The test organisms were not fed for the last 16 hours of the test. Daily observations were made during test material exchange and the numbers of live animals were recorded on the appropriate benchsheets. Any dead animals were removed from the test chambers.

The fathead larval test was terminated at the end of seven days. All live test organisms from each replicate chamber were counted, rinsed with deionized water and transferred as a group to a pre-weighed aluminum pan.. Pans with test organisms were dried at 105.0 °C for a minimum of six hours before being placed in a dessicator to cool. Each pan was weighed to the nearest 0.01 mg and the average test organism weight was determined by dividing by the original number of test organisms present (10).

C. dubia neonates (<24 hours old) were exposed to the effluent sample for six days under static, renewal conditions. Test organisms were exposed individually in 30 mL soufflé cups containing 15 mL of test solution with 10 replicates per concentration (10 organisms per concentration). At test material renewal, the test organisms were fed a combination of YCT (yeast, Cerophyll and trout-chow) and the green alga, *S. capricornutum,* daily during the test exposure. Daily observations of the number of live animals were made as well as the number of neonates produced and recorded on the appropriate benchsheets.

The *C. dubia* test was terminated at six days. The total number of neonates produced at each concentration was divided by the number of adult test organisms present to determine the average number of neonates produced

Both sets of test chambers were placed in randomized positions in a temperature controlled environment maintained at 25 $\pm$ 1 ° C for the duration of the test exposure period. The highest concentration used for exposure was 100 %. A 0.30 dilution schedule was used to prepare sample concentrations of 30%, 10%, 3% and 1%, by volume. A control sample consisting of 100 % dilution water was also tested.

RESULTS

FATHEAD MINNOW SURVIVAL AND GROWTH

An NOEC (No-Observable-Effect-Concentration) value of >100% for survival was produced. An NOEC value of >100% for growth was produced. As a result, the TUc for this test is 1.0 (100%/NOEC), for the growth endpoint.

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION

An NOEC value of 100% for survival was produced. An NOEC value of 30% for reproduction was produced. As a result, the TUc for this test is 3.33 (30%/NOEC), for the reproduction endpoint.

Table I. Fathead Minnow Physical/Chemical Measurements Summary
CLIENT: Rutgers Organics Corp., Salem Lagoon Water Treatment Plant
TEST: 7-Day Chronic Toxicity Test
DATE: August 19 – August 26, 2008

	Temp.	°C	pH	Std. Units	D. O.	ppm	Cond.	µmhos
CONC.	Min	Max	Min	Max	Min	Max	Min	Max
Control	24.5	25.0	7.3	8.2	7.3	8.1	289	291
1%	24.5	25.0	7.3	8.2	7.4	8.0		
3%	24.5	25.0	7.4	8.2	7.3	8.0		
10%	24.5	25.0	7.4	8.2	7.3	8.0		
30%	24.5	25.0	7.6	8.2	7.2	7.8		
100%	24.5	25.0	7.4	8.3	6.4	7.7	946	951

	Alkalinity mg/L		Hardness mg/L		Chlorine mg/L	
SAMPLE	0 %	100 %	0 %	100 %	0 %	100 %
01	70	180	90	430	0	0.02
02	70	200	90	410	0	0.01
03	70	160	90	360	0	0.01

Table II. *Ceriodaphnia dubia* Physical/Chemical Measurements Summary
CLIENT: Rutgers Organics Corp., Salem Lagoon Water Treatment Plant
TEST: 7-Day Chronic Toxicity Test
DATE: August 19 – August 25, 2008

	Temp.	°C	pH	Std. Units	D. O.	ppm	Cond.	µmhos
CONC.	Min	Max	Min	Max	Min	Max	Min	Max
Control	25.0	25.5	7.8	8.2	7.4	8.1	289	291
1%	25.0	25.5	7.8	8.2	7.4	8.0		
3%	25.0	25.5	7.8	8.2	7.4	8.0		
10%	25.0	25.5	7.8	8.2	7.5	8.0		
30%	25.0	25.5	7 7	8.3	7.3	8.0		
100%	24.5	25.5	7.4	8 4	6.4	8.0	946	951

	Alkalinity mg/L		Hardness mg/L		Chlorine mg/L	
SAMPLE	0 %	100 %	0 %	100 %	0 %	100 %
01	70	180	90	430	0	0 02
02	70	200	90	410	0	0.01
03	70	160	90	360	0	0.01

APPENDIX I

RAW DATA

RESULTS OF TWO CHRONIC TOXICITY EVALUATIONS OF
RUTGERS ORGANICS CORPORATION,
SALEM SITE LAGOON WATER TREATMENT PLANT
FINAL EFFLUENT

August 19 – August 26, 2008

Project Number: 51-01-86

Beginning Date & Time: 8-19-08 1710
Ending Date & Time: 8-25-08 1730

Ceriodaphnia dubia, Survival and Reproduction Test

American Aquatic Testing, Inc.,

Survival / Reproduction Data

Day	Conc. Control		Replicate 1		2		3		4		5		6		7		8		9		10		Initals
1	N	B	0		0		0		0		0		0		0		0		0		0		MFP
2	N	B	0		0		0		0		0		0		0		0		0		0		TBP
3	N	B	0		0		0		0		0		0		0		0		0		0		TBP
4	N	B	2	1	4	1	4	1	4	1	2	1	4	1	4	1	4	1	4	1	5	1	TBP
5	N	B	8	2	10	2	8	2	10	2	4	2	0		10	2	8	2	12	2	9	2	MFP
6	N	B	14	3	8	3	10	3	20	3	8	3	10	2	14	3	16	3	16	3	14	3	TBP
7	N	B																					
8	N	B																					
	Tot N	Tot B	24	3	22	3	22	3	34	3	14	3	14	2	28	3	28	3	32	3	28	3	Tot A
																							10

Average Neonates per Female = 24.6 % Females with 3rd Brood = 90

Day	Conc. 1%		Replicate 1		2		3		4		5		6		7		8		9		10		Initals
1	N	B	0		0		0		0		0		0		0		0		0		0		MFP
2	N	B	0		0		0		0		0		0		0		0		0		0		TBP
3	N	B	0		0		0		0		0		0		0		0		0		0		TBP
4	N	B	0		4	1	4	1	4	1	4	1	4	1	4	1	2	1	2	1	4	1	TBP
5	N	B	4	1	10	2	10	2	10	2	8	2	8	2	10	2	10	2	6	2	8	2	MFP
6	N	B	12	2	16	3	12	3	14	3	18	3	14	3	15	3	16	3	10	3	14	3	TBP
7	N	B																					
8	N	B																					
	Tot N	Tot B	16	2	30	3	26	3	28	3	30	3	26	3	29	3	28	3	18	3	26	3	Tot A
																							10

Average Neonates per Female = 25.7 % Females with 3rd Brood = 90

Day	Conc. 3%		Replicate 1		2		3		4		5		6		7		8		9		10		Initals
1	N	B	0		0		0		0		0		0		0		0		0		0		MFP
2	N	B	0		0		0		0		0		0		0		0		0		0		TBP
3	N	B	0		0		0		0		0		0		0		0		0		0		TBP
4	N	B	4	1	5	1	4	1	4	1	4	1	4	1	4	1	4	1	2	1	2	1	TBP
5	N	B	10	2	10	2	8	2	9	2	8	2	10	2	12	2	11	2	12	2	8	2	MFP
6	N	B	12	3	14	3	18	3	15	3	16	3	16	3	16	3	11	3	14	3	18	3	TBP
7	N	B																					
8	N	B																					
	Tot N	Tot B	26	3	29	3	30	3	28	3	28	3	30	3	32	3	26	3	28	3	28	3	Tot A
																							10

Average Neonates per Female = 28.5 % Females with 3rd Brood = 100

(N=Neonates, B=Broods, A=Alive)

Observations: _____

CHCDLCRP.wk3

Project Number: 51-0L-86

Beginning Date & Time: 8-19-08 1710
Ending Date & Time: 8-25-08 1730

Ceriodaphnia dubia, Survival and Reproduction Test

American Aquatic Testing, Inc.,

Survival / Reproduction Data

Day	Conc. 10%		Replicate 1	2	3	4	5	6	7	8	9	10	Initals
1	N	B	0	0	0	0	0	0	0	0	0	0	MPP
2	N	B	0	0	0	0	0	0	0	0	0	0	TAP
3	N	B	0	0	0	0	0	0	0	0	0	0	TAP
4	N	B	2 1	4 1	4 1	4 1	4 1	4 1	3 1	4 1	2 1	4 1	TAP
5	N	B	8 2	10 2	0	10 2	10 2	11 2	7 2	12 2	10 2	10 2	MPP
6	N	B	12 3	16 3	14 2	12 3	16 3	15 3	17 3	16 3	14 3	15 3	TAP
7	N	B											
8	N	B											
	Tot N	Tot B	22 3	30 3	18 2	26 3	30 3	30 3	27 3	32 3	26 3	29 3	Tot A 10

Average Neonates per Female = 27.0 % Females with 3rd Brood = 90

Day	Conc. 30%		Replicate 1	2	3	4	5	6	7	8	9	10	Initals
1	N	B	0	0	0	0	0	0	0	0	0	0	MPP
2	N	B	0	0	0	0	0	0	0	0	0	0	TAP
3	N	B	0	0	0	0	0	0	0	0	0	0	TAP
4	N	B	2 1	2 1	4 1	4 1	3 1	2 1	4 1	4 1	4 1	3 1	TAP
5	N	B	12 2	0	11 2	8 2	7 2	10 2	10 2	10 2	8 2	9 2	MPP
6	N	B	0	12 2	12 3	14 3	15 3	14 3	14 3	16 3	18 3	14 3	TAP
7	N	B											
8	N	B											
	Tot N	Tot B	14 2	14 2	27 3	26 3	25 3	26 3	28 3	30 3	30 3	26 3	Tot A 10

Average Neonates per Female = 24.6 % Females with 3rd Brood = 80

Day	Conc. 100%		Replicate 1	2	3	4	5	6	7	8	9	10	Initals
1	N	B	0	0	0	0	0	0	0	0	0	0	MPP
2	N	B	0	0	0	0	0	0	0	0	0	0	TAP
3	N	B	0	0	0	0	0	0	0	0	0	0	TAP
4	N	B	0	4 1	0	3 1	0	2 1	3 1	0	2 1	4 1	TAP
5	N	B	8 1	8 2	8 1	9 2	6 1	8 2	9 2	0	4 2	0	MPP
6	N	B	0	12 3	0	8 3	10 2	14 3	10 3	11 1	8 3	10 2	TAP
7	N	B	ε										
8	N	B											
	Tot N	Tot B	8 1	24 3	8 1	20 3	16 2	24 3	22 3	11 1	14 3	14 2	Tot A 10

Average Neonates per Female = 16.1 % Females with 3rd Brood = 50

(N=Neonates, B=Broods, A=Alive)

Observations: _____

CHCDLCRP.wk3

Client/Toxicant: 51
Job Number: 01-86
Species: C. dubia

Beginning Date & Time: 8-19-08 1710
Ending Date & Time: 8-25-08 1730

Freshwater Chronic Test

American Aquatic Testing, Inc.,

Physical / Chemical Parameters

Initial Readings

Parameter	Concentration	Day 1	2	3	4	5	6	7	8
T	Control	25.0	24.5	25.0	25.0	25.0	25.0		
e	1%	25.0	24.5	25.0	25.0	25.0	25.0		
m	3%	25.0	24.5	25.0	25.0	25.0	25.0		
p	10%	25.0	24.5	25.0	25.0	25.0	25.0		
	30%	25.0	24.5	25.0	25.0	25.0	25.0		
(°C)	100%	25.0	24.5	25.0	25.0	25.0	25.0		
	Control	7.8	8.1	8.0	8.0	7.7	8.1		
	1%	7.8	7.9	8.0	8.0	7.7	8.0		
Dissolved	3%	7.8	7.9	8.0	8.0	7.7	8.0		
Oxygen	10%	7.7	7.9	8.0	7.9	7.7	7.9		
	30%	7.5	7.6	7.5	7.4	7.3	7.8		
(mg/L)	100%	7.6	6.8	6.6	6.5	6.4	6.9		
	Control	8.1	8.1	8.1	7.9	8.1	8.1		
	1%	8.0	8.1	8.1	7.9	8.1	8.1		
pH	3%	8.0	8.1	8.0	7.9	8.1	8.1		
	10%	7.9	8.1	7.9	7.8	8.0	8.0		
	30%	7.9	8.0	7.7	7.7	7.8	7.9		
	100%	7.8	7.8	7.4	7.4	7.4	7.9		
	Initials	MKP	VDL	MKP	TAP	TAP	MKP		
	Date	8/19	8/20	8/21	8/22	8/23	8/24		

Conductivity (µmhos/cm)		
Date	Control	100%
8/19	291	951
8/21	289	951
8/23	289	946
Initials	MKP	MKP

Alkalinity (mg/L as $CaCO_3$)		
Date	Control	100%
8/19	70	180
8/21	70	200
8/23	70	160

Hardness (mg/L as $CaCO_3$)		
Date	Control	100%
8/19	90	430
8/21	90	410
8/23	90	360
Initials	VDL	VDL

Final Readings

Parameter	Concentration	Day 1	2	3	4	5	6	7	8
T	Control	25.0	25.0	25.5	25.5	25.0	25.0		
e	1%	25.0	25.0	25.5	25.5	25.0	25.0		
m	3%	25.0	25.0	25.5	25.5	25.0	25.0		
p	10%	25.0	25.0	25.5	25.5	25.0	25.0		
	30%	25.0	25.0	25.5	25.5	25.0	25.0		
(°C)	100%	25.0	25.0	25.5	25.5	25.0	25.0		
	Control	7.8	7.4	7.6	7.7	8.0	7.9		
	1%	7.8	7.4	7.6	7.7	8.0	7.9		
Dissolved	3%	7.8	7.4	7.6	7.7	8.0	7.9		
Oxygen	10%	7.8	7.5	7.5	7.7	8.0	7.9		
	30%	7.8	7.6	7.5	7.6	8.0	8.0		
(mg/L)	100%	7.8	7.5	7.5	7.6	8.0	8.0		
	Control	8.1	7.9	7.8	7.9	8.2	8.1		
	1%	8.1	7.9	7.8	7.9	8.2	8.1		
pH	3%	8.1	7.8	7.8	7.9	8.2	8.1		
	10%	8.0	7.8	7.8	7.9	8.2	8.2		
	30%	8.0	7.8	7.8	8.0	8.3	8.3		
	100%	8.4	8.0	8.3	8.3	8.4	8.4		
	Initials	VDL	MKP	VDL	TAP	MKP	TAP		
	Date	8/20	8/21	8/22	8/23	8/24	8/25		

Chlorine (mg/L)		
Date	Control	100%
8/19	0.00	0.02
8/21	0.00	0.01
8/23	0.00	0.00
NaSO4 Added (mg/L)		
Date	Control	100%
Initials	VDL	VDL

Observations: Ø 8.4 MKP 8/21

Ceriodaphnia Survival and Reproduction Test-7 Day Survival

Start Date:	8/19/2008	Test ID:	510186cd	Sample ID:	Rutgers
End Date:	8/25/2008	Lab ID:	AAT, Inc	Sample Type:	Grab
Sample Date:		Protocol:	EPAF 94-EPA/600/4-91/002	Test Species:	CD-Ceriodaphnia dubia
Comments:					

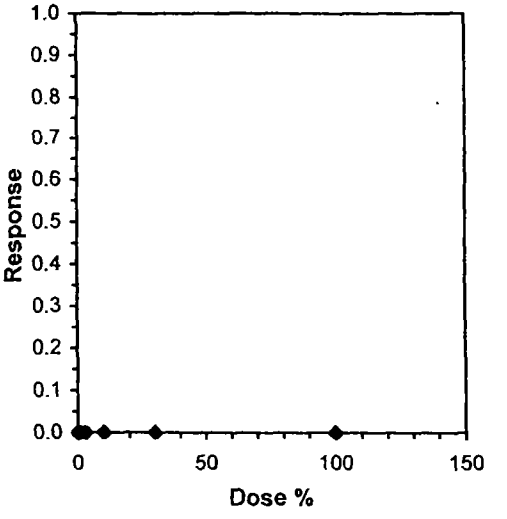
Conc-%	1	2	3	4	5	6	7	8	9	10
Control	1.0000	1.0000	1.0000	1.0000	1 0000	1.0000	1.0000	1.0000	1.0000	1.0000
1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1 0000
3	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
30	1.0000	1.0000	1 0000	1.0000	1 0000	1.0000	1.0000	1.0000	1.0000	1.0000
100	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Conc-%	Mean	N-Mean	Resp	Not Resp	Total	N	Fisher's Exact P	1-Tailed Critical	Isotonic Mean	Isotonic N-Mean
Control	1.0000	1.0000	0	10	10	10			1.0000	1.0000
1	1.0000	1.0000	0	10	10	10	1.0000	0.0500	1.0000	1.0000
3	1.0000	1.0000	0	10	10	10	1.0000	0.0500	1.0000	1.0000
10	1.0000	1.0000	0	10	10	10	1.0000	0.0500	1.0000	1.0000
30	1.0000	1.0000	0	10	10	10	1.0000	0.0500	1.0000	1.0000
100	1.0000	1.0000	0	10	10	10	1.0000	0.0500	1.0000	1.0000

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Fisher's Exact Test	100	>100		1
Treatments vs Control				

Linear Interpolation (200 Resamples)

Point	%	SD	95% CL	Skew
IC05	>100			
IC10	>100			
IC15	>100			
IC20	>100			
IC25	>100			
IC40	>100			
IC50	>100			



Ceriodaphnia Survival and Reproduction Test-Reproduction

Start Date:	8/19/2008	Test ID:	510186cd	Sample ID:	Rutgers
End Date:	8/25/2008	Lab ID:	AAT, Inc	Sample Type:	Grab
Sample Date:		Protocol:	EPAF 94-EPA/600/4-91/002	Test Species:	CD-Ceriodaphnia dubia
Comments:					

Conc-%	1	2	3	4	5	6	7	8	9	10
Control	24.000	22.000	22.000	34.000	14.000	14.000	28.000	28.000	32.000	28.000
1	16.000	30.000	26.000	28.000	30.000	26.000	29.000	28.000	18.000	26.000
3	26.000	29.000	30.000	28.000	28.000	30.000	32.000	26.000	28.000	28.000
10	22.000	30.000	18.000	26.000	30.000	30.000	27.000	32.000	26.000	29.000
30	14.000	14.000	27.000	26.000	25.000	26.000	28.000	30.000	30.000	26.000
100	8.000	24.000	8.000	20.000	16.000	24.000	22.000	11.000	14.000	14.000

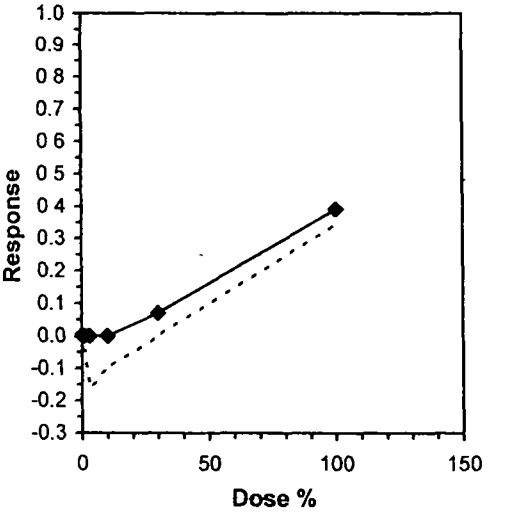
			Transform: Untransformed					1-Tailed			Isotonic	
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	Mean	N-Mean
Control	24.600	1.0000	24.600	14.000	34.000	27.650	10				26.450	1.0000
1	25.700	1.0447	25.700	16.000	30.000	18.889	10	-0.471	2.287	5.336	26.450	1.0000
3	28.500	1.1585	28.500	26.000	32.000	6.459	10	-1.671	2.287	5.336	26.450	1.0000
10	27.000	1.0976	27.000	18.000	32.000	15.810	10	-1.028	2.287	5.336	26.450	1.0000
30	24.600	1.0000	24.600	14.000	30.000	23.719	10	0.000	2.287	5.336	24.600	0.9301
*100	16.100	0 6545	16.100	8.000	24.000	38.227	10	3.642	2.287	5.336	16.100	0 6087

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Kolmogorov D Test indicates non-normal distribution (p <= 0.05)	1.07707	0.895	-0.6774	-0.0234
Bartlett's Test indicates equal variances (p = 0.02)	13.3376	15.0863		

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test Treatments vs Control	30	100	54.7723	3.33333	5.3361	0.21691	188.457	27 2278	4.7E-05	5, 54

Linear Interpolation (200 Resamples)

Point	%	SD	95% CL		Skew
IC05	24.297	10.691	6.063	41.954	0.1032
IC10	36.547	10.801	14.886	54.113	-0.1799
IC15	47.438	11.666	22.844	67.485	-0.2349
IC20	58.329				
IC25	69.221				
IC40	>100				
IC50	>100				



Client/Toxicant: 51
Project Number: 01-86
Species: P. promelas

Beginning Date & Time: 8-19-08 1430
Ending Date & Time: 8/26/08 1430
Hatch Date: 8/18/08

Chronic Test
American Aquatic Testing, Inc.
Live Count

Conc.	Rep	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Control	A	10	10	10	10	10	10	10	10
	B	10	10	10	10	10	10	10	10
	C	10	10	10	10	10	10	10	10
	D	10	10	10	10	10	10	10	10
1%	A	10	10	10	10	10	10	10	10
	B	10	10	10	10	10	10	10	10
	C	10	10	10	10	10	10	10	10
	D	10	10	10	10	10	10	10	10
3%	A	10	10	10	10	10	10	10	9
	B	10	10	10	10	10	10	10	10
	C	10	10	10	10	10	10	10	10
	D	10	10	10	10	10	10	10	10
10%	A	10	10	10	10	10	10	10	10
	B	10	10	10	10	10	10	10	10
	C	10	10	10	10	10	10	10	10
	D	10	10	10	10	10	10	10	10
30%	A	10	10	10	10	10	10	10	10
	B	10	9	9	9	9	9	9	8
	C	10	10	10	10	10	10	10	10
	D	10	10	10	10	10	10	10	9
100%	A	10	10	10	10	10	10	10	10
	B	10	10	10	10	10	10	10	10
	C	10	10	10	10	10	10	10	10
	D	10	10	10	10	10	10	10	10
\	A								
	B								
	C								
	D								
Initials		WW	WW	MKP	WW	TAP	MKP	WW	WW
Date		8/19	8/20	8/21	8/22	8/23	8/24	8/25	8/26

Observations:

CHFHLC.wk3

Client/Toxicant: SI
Project Number: 01-86
Species: P. promelas

Beginning Date & Time: 8-19-08 1430
Ending Date & Time: 8/26/08 1430
Hatch Date: 8/18/08

Chronic Test

American Aquatic Testing, Inc.

Weight Data

% Conc.	Rep	Pan #	A weight of boat (g)	B weight of boat & fish (g)	(B−A)*1000=C dry weight of fish (mg)	D # of surviving fish	C/D mean dry weight (mg)	C/E IC_{25} & NOEC calc. weight (mg)
Control	A	1	0.01227	0.01534	3.07	10	0.307	0.307
	B	2	0.01276	0.01601	3.25	10	0.325	0.325
	C	3	0.01386	0.01673	2.87	10	0.287	0.287
	D	4	0.01372	0.01604	2.32	10	0.232	0.232
1	A	5	0.01292	0.01672	3.80	10		0.380
	B	6	0.01290	0.01602	3.12	10		0.312
	C	7	0.01230	0.01577	3.47	10		0.347
	D	8	0.01214	0.01574	3.60	10		0.360
3	A	9	0.01276	0.01460	1.84	9		0.184
	B	10	~~0.01139~~ ①	0.01471	3.20	10		0.320
	C	11	0.01245	0.01598	3.53	10		0.353
	D	12	0.01133	0.01484	3.51	10		0.351
10	A	13	0.01209	0.01577	3.68	10		0.368
	B	14	0.01168	0.01558	3.90	10		0.390
	C	15	0.01175	0.01586	4.11	10		0.411
	D	16	0.01278	0.01588	3.10	10		0.310
30	A	17	0.01126	0.01512	3.86	10		0.386
	B	18	0.01260	0.01601	3.41	8		0.341
	C	19	0.01205	0.01538	3.33	10		0.333
	D	20	0.01188	0.01522	3.34	9		0.334
100	A	21	0.01264	0.01568	3.04	10		0.304
	B	22	0.01153	0.01517	3.64	10		0.364
	C	23	0.01196	0.01510	3.14	10		0.314
	D	24	0.01332	0.01698	3.66	10		0.366
\	A							
	B							
	C							
	D							
Initials			thd	thd	thd	[illegible]	thd	thd
Date			8/26/08	8/27/08	8/27/08	8/27/08	8/27/08	8/27/08

E = Original number of organisms at test initiation, adjusted for losses.

Observations: ① 0.01151

Client/Toxicant: 51
Job Number: 01-86
Species: P. promelas

Beginning Date & Time: 8-19-08 1430
Ending Date & Time: 8/26/08 1430

Freshwater Chronic Test

American Aquatic Testing, Inc.,

Physical / Chemical Parameters

Initial Readings

Parameter	Concentration	Day 1	2	3	4	5	6	7	8
T	Control	25.0	24.5	25.0	25.0	25.0	25.0	25.5	
e	1%	25.0	24.5	25.0	25.0	25.0	25.0	25.5	
m	3%	25.0	24.5	25.0	25.0	25.0	25.0	25.5	
p	10%	25.0	24.5	25.0	25.0	25.0	25.0	25.5	
	30%	25.0	24.5	25.0	25.0	25.0	25.0	25.5	
(°C)	100%	25.5	24.5	25.5	25.0	25.0	25.0	26.0	
	Control	7.8	8.0	8.0	8.0	7.7	8.1	7.8	
	1%	7.8	7.9	8.0	8.0	7.7	8.0	7.8	
Dissolved	3%	7.8	7.9	8.0	8.0	7.7	8.0	7.8	
Oxygen	10%	7.7	7.9	8.0	7.9	7.7	7.9	7.8	
	30%	7.5	7.6	7.5	7.4	7.3	7.8	7.6	
(mg/L)	100%	6.6	6.8	6.6	6.5	6.4	6.9	6.5	
	Control	8.1	8.1	8.1	7.9	8.1	8.1	8.1	
	1%	8.0	8.1	8.1	7.9	8.1	8.1	8.1	
pH	3%	8.0	8.1	8.0	7.9	8.1	8.1	8.1	
	10%	7.9	8.1	7.9	7.8	8.0	8.0	8.0	
	30%	7.9	8.0	7.7	7.7	7.8	7.9	7.8	
	100%	7.8	7.8	7.4	7.4	7.4	7.9	7.6	
	Initials	MKP	MKP	MKP	TAP	TAP	KRP	MKP	
	Date	8/19	8/20	8/21	8/22	8/23	8/24	8/25	

Conductivity (µmhos/cm)		
Date	Control	100%
8/19	291	951
8/21	289	951
8/23	289	946
Initials	MKP	MKP

Alkalinity (mg/L as $CaCO_3$)		
Date	Control	100%
8/19	70	180
8/21	70	200
8/23	70	160

Hardness (mg/L as $CaCO_3$)		
Date	Control	100%
8/19	90	430
8/21	90	410
8/23	90	360
Initials	MKP	MKP

Chlorine (mg/L)		
Date	Control	100%
8/19	0.00	0.02
8/21	0.00	0.01
8/23	0.02	0.00

$NaSO_4$ Added (mg/L)		
Date	Control	100%
Initials	MKP	MKP

Final Readings

Parameter	Concentration	Day 1	2	3	4	5	6	7	8
T	Control	24.5	25.0	25.0	25.0	25.0	25.0	25.0	
e	1%	24.5	25.0	25.0	25.0	25.0	25.0	25.0	
m	3%	24.5	25.0	25.0	25.0	25.0	25.0	25.0	
p	10%	24.5	25.0	25.0	25.0	25.0	25.0	24.5	
	30%	24.5	25.0	25.0	25.0	25.0	25.0	24.5	
(°C)	100%	24.5	25.0	25.0	25.0	25.0	25.0	24.5	
	Control	7.4	7.3	7.4	7.6	7.4	7.4	7.9	
	1%	7.5	7.4	7.4	7.6	7.4	7.4	7.8	
Dissolved	3%	7.5	7.4	7.4	7.6	7.3	7.4	7.7	
Oxygen	10%	7.4	7.4	7.3	7.5	7.4	7.4	7.5	
	30%	7.3	7.2	7.2	7.4	7.3	7.4	7.3	
(mg/L)	100%	7.4	7.1	7.1	7.3	7.3	7.5	7.7	
	Control	7.8	7.3	7.6	7.8	8.2	7.9	7.9	
	1%	7.8	7.3	7.6	7.8	8.2	7.9	7.8	
pH	3%	7.8	7.4	7.6	7.8	8.2	7.9	7.7	
	10%	7.8	7.4	7.6	7.8	8.2	8.0	7.7	
	30%	7.9	7.6	7.8	8.0	8.2	8.0	7.8	
	100%	8.2	8.2	8.3	8.2	8.3	8.2	8.1	
	Initials	MKP	MKP	TAP	TAP	MKP	TAP	MKP	
	Date	8/20	8/21	8/22	8/23	8/24	8/25	8/26	

Observations:

Larval Fish Growth and Survival Test-7 Day Survival

Start Date:	8/19/2008	Test ID:	510186pp	Sample ID:	Rutgers
End Date:	8/26/2008	Lab ID:	AAT, Inc	Sample Type:	Grab
Sample Date:		Protocol:	EPAF 94-EPA/600/4-91/002	Test Species:	PP-Pimephales promelas
Comments:					

Conc-%	1	2	3	4
Control	1.0000	1.0000	1.0000	1 0000
1	1.0000	1.0000	1.0000	1.0000
3	0.9000	1.0000	1.0000	1.0000
10	1.0000	1.0000	1.0000	1.0000
30	1.0000	0.8000	1.0000	0.9000
100	1.0000	1.0000	1.0000	1.0000

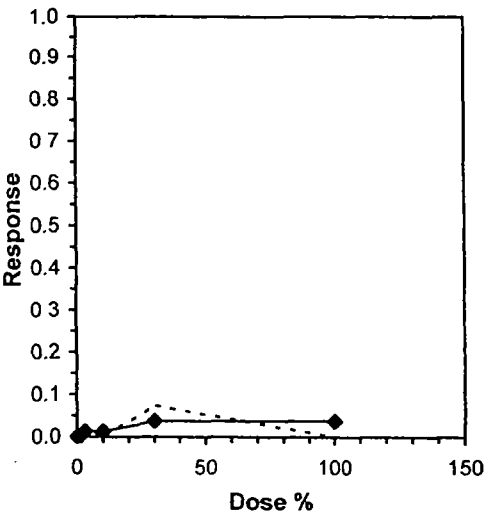
			Transform: Arcsin Square Root					1-Tailed			Isotonic	
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	Mean	N-Mean
Control	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	4				1.0000	1.0000
1	1.0000	1 0000	1.4120	1.4120	1 4120	0.000	4	0.000	2.410	0.1169	1.0000	1.0000
3	0.9750	0.9750	1.3713	1.2490	1.4120	5.942	4	0.840	2.410	0.1169	0.9875	0.9875
10	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	4	0.000	2.410	0.1169	0.9875	0.9875
*30	0.9250	0.9250	1.2951	1.1071	1.4120	11.347	4	2.411	2.410	0.1169	0.9625	0.9625
100	1.0000	1.0000	1.4120	1.4120	1 4120	0.000	4	0.000	2.410	0.1169	0.9625	0.9625

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.73394	0.916	-1.0941	4.29567
Equality of variance cannot be confirmed				

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test Treatments vs Control	100	>100		1	0.04909	0.05035	0.00896	0.00471	0.14381	5, 18

Linear Interpolation (200 Resamples)

Point	%	SD	95% CL(Exp)	Skew
IC05	>100			
IC10	>100			
IC15	>100			
IC20	>100			
IC25	>100			
IC40	>100			
IC50	>100			



Larval Fish Growth and Survival Test-7 Day Biomass

Start Date:	8/19/2008	Test ID:	510186pp	Sample ID:	Rutgers
End Date:	8/26/2008	Lab ID:	AAT, Inc	Sample Type:	Grab
Sample Date:		Protocol:	EPAF 94-EPA/600/4-91/002	Test Species:	PP-Pimephales promelas
Comments:					

Conc-%	1	2	3	4
Control	0.3070	0.3250	0.2870	0.2320
1	0.3800	0.3120	0.3470	0.3600
3	0.1840	0.3200	0.3530	0.3510
10	0.3680	0.3900	0.4110	0.3100
30	0.3860	0.3410	0.3330	0.3340
100	0.3040	0.3640	0.3140	0.3660

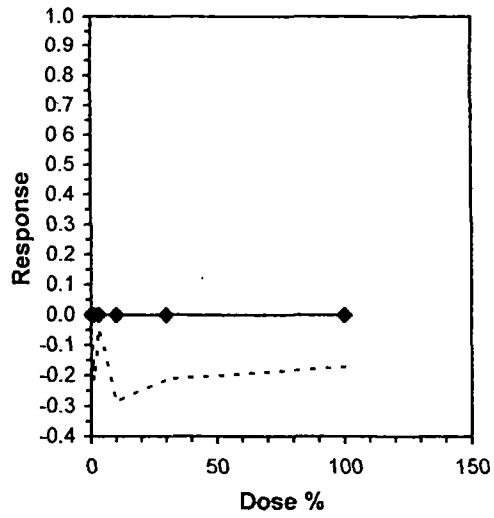
			Transform: Untransformed					1-Tailed			Isotonic	
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	Mean	N-Mean
Control	0.2878	1 0000	0.2878	0.2320	0.3250	13.997	4				0.3325	1.0000
1	0.3498	1.2155	0.3498	0.3120	0.3800	8.175	4	-1.925	2.410	0.0776	0.3325	1.0000
3	0.3020	1.0495	0.3020	0.1840	0.3530	26.525	4	-0.442	2.410	0.0776	0.3325	1.0000
10	0.3698	1.2850	0.3698	0.3100	0.4110	11.773	4	-2.546	2.410	0.0776	0.3325	1.0000
30	0.3485	1.2111	0.3485	0.3330	0.3860	7.246	4	-1.886	2.410	0.0776	0.3325	1.0000
100	0.3370	1.1712	0.3370	0.3040	0.3660	9.673	4	-1.529	2.410	0.0776	0.3325	1.0000

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.91638	0.916	-1.1737	1.73897
Bartlett's Test indicates equal variances (p = 0.38)	5.28301	15.0863		

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test Treatments vs Control	100	>100		1	0.07763	0.26979	0.00392	0.00208	0.1468	5, 18

Linear Interpolation (200 Resamples)

Point	%	SD	95% CL(Exp)	Skew
IC05	>100			
IC10	>100			
IC15	>100			
IC20	>100			
IC25	>100			
IC40	>100			
IC50	>100			



AMERICAN AQUATIC TESTING, INC.

890 North Graham St. Job #: 51-01-86
ALLENTOWN, PA 18109
610 434 9015

Client: ~~Hometown Bottle~~ Rutgers Organics Client Contact: Denny Lane
Address: 1224 Benton Rd Salem, OHio
Phone #: (330) 332-0108

CHAIN OF CUSTODY

Sample Disposal: **Return to client** [ ] **Lab disposal** [X]

	Initial Chemistry Upon Arrival @ Laboratory						SAMPLE INFORMATION					Toxicity Testing Requested			
Sample #	Temp °C	Dis. O_2	pH	Alk. mg/L	Hard. mg/L	Cl- mg/L	Sample Identification	Sample Type C = Comp G=Grab	Sample Volume	Sample Date	Sample Time	Acute	Chronic	Sediment	Oth
01	11.0						Outfall 8-18-08	G	2 Gal.	8-18-08	1230	X	X		

Samples were:
1. Collected by AAT personnel [ ] Client personnel [X]
2. Transported on ice? Yes [X] No [ ]
3. Received with in holding time? Yes [X] No [ ]
4. Sample matrix is: Liquid [X] Sediment [ ] Soil [ ] Other [ ]

CUSTODY INFORMATION									Lab Use
Sample #	Relinquished by:	Received by:	Date	Time	Relinquished by:	Received for Lab:	Date	Time	ISTN#
01	Denny Lane	Fed ex	8-18-08	1400	Fed ex	Michael Baker	8/19/08	0900	08723

Special Instructions: Dilution water collection date(s)

Will ammonia be analyzed on these samples? Yes (No)

Will additional parameters be analyzed on these samples? Yes (No)

AMERICAN AQUATIC TESTING, INC.

CHAIN OF CUSTODY

890 North Graham St.
ALLENTOWN, PA 18109
610 434 9015

Job #: 51-01-86

Client: Howells; Baird / Rutgers Organics Client Contact: Dr. Rainer Domalski

Address: 201 Struble Rd, State College, PA.

Phone #: Salem, Ohio Site (814) 231-9200

Sample Disposal: **Return to client** [ ] **Lab disposal** [X]

	Initial Chemistry Upon Arrival @ Laboratory						SAMPLE INFORMATION					Toxicity Testing Requested			
Sample #	Temp °C	Dis. O_2	pH	Alk. mg/L	Hard. mg/L	Cl- mg/L	Sample Identification	Sample Type C = Comp G=Grab	Sample Volume	Sample Date	Sample Time	Acute	Chronic	Sediment	Oth
02	5.0						Outfall 8-20-08	G	2 Gal.	8-20-08	1400		X		

Samples were

1. Collected by AAT personnel [ ] / Client personnel [X]
2. Transported on ice? Yes [X] No [ ]
3. Received with in holding time? Yes [ ] No [ ]
4. Sample matrix is: Liquid [X] Sediment [ ] Soil [ ] Other [ ]

CUSTODY INFORMATION

Sample #	Relinquished by:	Received by:	Date	Time	Relinquished by:	Received for Lab:	Date	Time	Lab Use ISTN#
02	Denny Lane	Fedex	8-20-08	1500	Fedex	T. Pallgo	8-21-08	920	08722

Special Instructions: Dilution water collection date(s)

Will ammonia be analyzed on these samples? Yes (No)

Will additional parameters be analyzed on these samples? Yes (No)

AMERICAN AQUATIC TESTING, INC.

890 North Graham St.
ALLENTOWN, PA 18109
610 434 9015

Job #: 51-01-86

Client: Hovels & Baird / Rutgers Organics Client Contact: Dr. Rainer Domalski

Address: 201 Struble Rd.; State College, PA. 16801

Phone #: (814) 231-9200

Salem, Ohio Site

CHAIN OF CUSTODY

Sample Disposal: **Return to client** [ ] **Lab disposal** [X]

	Initial Chemistry Upon Arrival @ Laboratory						SAMPLE INFORMATION					Toxicity Testing Requested			
Sample #	Temp °C	Dis. O_2	pH	Alk. mg/L	Hard. mg/L	Cl- mg/L	Sample Identification	Sample Type C = Comp G=Grab	Sample Volume	Sample Date	Sample Time	Acute	Chronic	Sediment	Oth
01	4.0						OUTFALL 8-22-08	G	2 GAL	8-22-08	1300		X		

Samples were:
1. Collected by AAT personnel [ ] Client personnel [X]
2. Transported on ice? Yes [X] No [ ]
3. Received with in holding time? Yes [ ] No [ ]
4. Sample matrix is: Liquid [X] Sediment [ ] Soil [ ] Other [ ]

CUSTODY INFORMATION									Lab Use
Sample #	Relinquished by:	Received by:	Date	Time	Relinquished by:	Received for Lab:	Date	Time	ISTN#
	Denny Lane	Fedex	8-22-08	1400	Fedex	T. Pellegrino	8/23/08	1315	0873

Special Instructions: Dilution water collection date(s)

Will ammonia be analyzed on these samples? Yes (No)

Will additional parameters be analyzed on these samples? Yes (No)

APPENDIX II

OHIO EPA NPDES BIOMONITORING REPORT FORM

Date Created: 5/24/91
Last Revised: 9/23/91

OHIO EPA NPDES BIOMONITORING REPORT FORM

GENERAL INFORMATION

1. Facility Name: Ruetgers-Nease Corporation
   Reporting Date: September 6, 2008

2. Address: 1224 Benton Road
   Salem, Ohio 44460

3. Ohio EPA Permit Number: Substantive Discharge Criteria
4. Application (NPDES) No.

5. Facility Contact: Ralph Pearce 6. Phone No.: (800) 458-3434

7. Consultant/Testing Lab Name: American Aquatic Testing, Inc.

8. Consultant/Lab Contact: Chris Nally 9. Phone No.: (610) 434-9015

10. Receiving Water(s) of Discharge: Unnamed Tributary of the Middle Fork of Middle Creek.

	08/18/08	08/20/08	08/22/08
11. Outfall(s) Tested:	001	001	001 .

Average Daily Flows:
on Day Sampled (gal/day)

12. Is your current Standard Operating Procedure (SOP) Manual on file with Ohio EPA? (Yes/No) No If yes, date submitted: _____.
If no, an SOP that follows Ohio EPA and/or U.S. EPA protocols must be submitted as soon as possible in order to eliminate the need to include this information with every report.

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature

09/09/08
Date

Christopher J. Nally, President

OEPA Permit No.: _____

CHRONIC TOXICITY TEST SAMPLING DATA

TABLE

Sampling Summary for Chronic Toxicity Tests

Sampling Location & Description	Sample	Sample Collection Beginning MM/DD/Time	Ending MM/DD/Time	Weather/Receiving Stream Conditions
Final Effluent: Processed Water				
Outfall No.: 001	1st	08/18 1230	N/A	N/A
Type (Grab/Composite): Grab	2nd	08/20 1400	N/A	N/A
Volume Collected: 2.5-gallon	3rd	08/22 1300	N/A	N/A
Upstream Station:		N/A	N/A	N/A
Waterbody:	1st			
Station No.:	2nd			
Type (Grab/Composite):	3rd			
Volume Collected:				
Downstream Station (Near-field):		N/A	N/A	N/A
Waterbody:	1st			
Station No.:	2nd			
Type (Grab/Composite):	3rd			
Volume Collected:				
Downstream Station (Far-field):		N/A	N/A	N/A
Waterbody:	1st			
Station No.:	2nd			
Type (Grab/Composite):	3rd			
Volume Collected:				
Additional Stations (If needed):		N/A	N/A	N/A
Waterbody:	1st			
Station No.:	2nd			
Type (Grab/Composite):	3rd			
Volume Collected:				

TOXICITY TEST CONDITIONS

TABLE

Summary of Toxicity Test Conditions

1. Test Species and Age:	*Ceriodaphnia dubia* - 2 to 7 hrs old
2. Test Type and Duration:	3 brood Chronic Toxicity Test
3. Test Dates:	August 19 - August 25, 2008
4. Test Temperature (°C):	25.0°C
5. Light Quality:	340-ft candles
6. Photoperiod:	16 hours light / 8 hours dark
7. Feeding Regime:	0.1 mL *Selenastrum* and 0.1 mL YCT daily
8. Size of Test Vessel:	30 mL
9. Volume and Depth of Test Solutions:	15 mL / 25 mm
10. No. of Test Organisms per Test Vessel:	One
11. No. of Test Vessels per Test Solution:	Ten
12. Total No. of Test Organisms per Test Solution:	Ten
13. Test Concentrations (as percent by volume effluent):	0%, 1%, 3%, 10%, 30%, and 100%
14. Renewal of Test Solutions:	Daily
15. Dilution and Primary Control Water:	Moderately Hard Reconstituted Water
16. Secondary Control Water:	N/A
17. Aeration? Before/During Test:	None
18. Endpoints Measured:	NOEC, LOEC, TU_c, ChV, LC_{50}, IC_{25}
19. If secondary control water used as diluent due to toxicity in primary control water, indicate number of consecutive tests conducted with alternative diluent:	N/A

CHRONIC TOXICITY TEST RESULTS FOR CERIODAPHNIA DUBIA

TABLE

Results of a 7-day Ceriodaphnia dubia Survival and reproduction Test Conducted
(genus) (species)
08/19/08 - 08/25/08 Using Effluent form Outfall 001 .
(mm/dd/yy) (mm/dd/yy) (number)

Test Solutions	Cumulative Percent Mortality[a] (Cumulative Percent Adversely Affected)[a] 1	2	3	4	5	6	7	Number of Young Produced[a] Total	Mean
Primary control/ Dilution water	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	246	24.6
Secondary Control	N/A ( )	( )	( )	( )	( )	( )	( )	N/A	N/A
1 % Effluent	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	257	25.7
3 % Effluent	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	285	28.5
10 % Effluent	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	270	27.0
30 % Effluent	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	246	24.6
100 % Effluent	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (00)	161	16.1
Near-Field Sample	N/A ( )	( )	( )	( )	( )	( )	( )	N/A	N/A
Far-Field Sample	N/A ( )	( )	( )	( )	( )	( )	( )	N/A	N/A

NOEC Values	100 %	100 %	100 %	100 %	100 %	100 %	100 %	Calculated TUc Value for Survival: 1.00
95% Confidence Limits LL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
UL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
EC_{50} Values	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Calculated TUc Value for Reproduction: 3.33
95% Confidence Limits LL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
UL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

7-day NOEC for Mortality: 100%	7-day NOEC for Reproduction: 30%	Method(s) Used to Determine Values:
7-day LOEC for Mortality: Not Detected	7-day LOEC for Reproduction: Not Detected	Kolmogorov D
Chronic Value for Mortality: 1.0	Chronic Value for Reproduction: 3.33	Bartlett's Test

a – indicate significant differences from the primary control with an * (p=0.05).

ADDITIONAL TOXICITY TEST INFORMATION

1. Submit all raw data and statistical calculations/printouts obtained during the test(s). Data must be presented in tabular form and must include all physical and/or chemical measurements recorded during the tests and sampling (e.g., temperature, conductivity, dissolved oxygen, pH, hardness, alkalinity, etc.).

2. Method(s) used to verify near-field and/or far-field sampling locations must be included if stream testing is required. Maps, sketches, and/or drawings may be used to show locations.

CONCLUSIONS/COMMENTS

Indicate below any other relevant information that may aid in the evaluation of this report. Include any deviations from your SOP that were necessary for these tests and any recent Standard Reference Toxicant (SRT) results obtained. Do these results agree with previous SRT results? Attach additional pages as needed.

Standard reference Toxicant test:

Toxicant: Potassium chloride

Date: 08/20-27/08

IC_{25}: 321.0 ppm

Average: 317.5 ppm

Upper Limit: 431.0 ppm

Lower Limit: 204.0 ppm

Test value +/- 2 std. Dev.: Yes

Date Created: 5/24/91
Last Revised: 9/23/91

OHIO EPA NPDES BIOMONITORING REPORT FORM

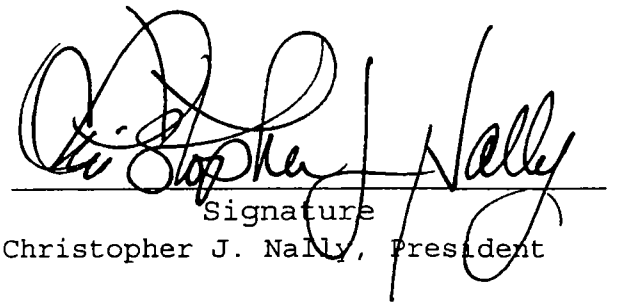
GENERAL INFORMATION

1. Facility Name: Ruetgers-Nease Corporation
   Reporting Date: September 6, 2007,
2. Address: 1224 Benton Road
   Salem, Ohio 44460
3. Ohio EPA Permit Number: Substantive Discharge Criteria
4. Application (NPDES) No.
5. Facility Contact: Ralph Pearce 6. Phone No.: (800) 458-3434
7. Consultant/Testing Lab Name: American Aquatic Testing, Inc.
8. Consultant/Lab Contact: Chris Nally 9. Phone No.: (610) 434-9015
10. Receiving Water(s) of Discharge: Unnamed Tributary of the Middle Fork of Middle Creek.

	08/18/08	08/20/08	08/22/08
11. Outfall(s) Tested:	001	001	001
Average Daily Flows: on Day Sampled (gal/day)			

12. Is your current Standard Operating Procedure (SOP) Manual on file with Ohio EPA? (Yes/No) No If yes, date submitted: _____.
    If no, an SOP that follows Ohio EPA and/or U.S. EPA protocols must be submitted as soon as possible in order to eliminate the need to include this information with every report.

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.



Signature

Christopher J. Nally, President

09/09/08
Date

OEPA Permit No.: _____

CHRONIC TOXICITY TEST SAMPLING DATA

TABLE

Sampling Summary for Chronic Toxicity Tests

Sampling Location & Description	Sample	Sample Collection Beginning MM/DD/Time	Ending MM/DD/Time	Weather/Receiving Stream Conditions
Final Effluent: Processed Water				
Outfall No.: 001	1st	08/18 1230	N/A	N/A
Type (Grab/Composite): Grab	2nd	08/20 1400	N/A	N/A
Volume Collected: 2.5-gallon	3rd	08/22 1300	N/A	N/A
Upstream Station:		N/A	N/A	N/A
Waterbody:	1st			
Station No.:	2nd			
Type (Grab/Composite):	3rd			
Volume Collected:				
Downstream Station (Near-field):		N/A	N/A	N/A
Waterbody:	1st			
Station No.:	2nd			
Type (Grab/Composite):	3rd			
Volume Collected:				
Downstream Station (Far-field):		N/A	N/A	N/A
Waterbody:	1st			
Station No.:	2nd			
Type (Grab/Composite):	3rd			
Volume Collected:				
Additional Stations (If needed):		N/A	N/A	N/A
Waterbody:	1st			
Station No.:	2nd			
Type (Grab/Composite):	3rd			
Volume Collected:				

TOXICITY TEST CONDITIONS

TABLE

Summary of Toxicity Test Conditions

1. Test Species and Age:	*Pimephales promelas* - < 48-hr old
2. Test Type and Duration:	7-day Chronic Toxicity Test
3. Test Dates:	August 19 – August 26, 2008
4. Test Temperature (°C):	25.0°C
5. Light Quality:	340-ft candles
6. Photoperiod:	16 hours light / 8 hours dark
7. Feeding Regime:	0.1 mL *Artemia* nauplii two times daily
8. Size of Test Vessel:	1000 mL
9. Volume and Depth of Test Solutions:	500 mL / 92 mm
10. No. of Test Organisms per Test Vessel:	Ten
11. No. of Test Vessels per Test Solution:	Four
12. Total No. of Test Organisms per Test Solution:	40
13. Test Concentrations (as percent by volume effluent):	0%, 1%, 3%, 10%, 30%, and 100%
14. Renewal of Test Solutions:	Daily
15. Dilution and Primary Control Water:	Moderately Hard Reconstituted Water
16. Secondary Control Water:	N/A
17. Aeration? Before/During Test:	None
18. Endpoints Measured:	NOEC, LOEC, TU_c, ChV, LC_{50}, IC_{25}
19. If secondary control water used as diluent due to toxicity in primary control water, indicate number of consecutive tests conducted with alternative diluent:	N/A

CHRONIC TOXICITY TEST RESULTS FOR Pimephales Promelas

TABLE

Results of a 7-day Pimephales promelas Survival and Growth Test Conducted
(genus) (species)
08/19/08 - 08/26/08 Using Effluent form Outfall 001 .
(mm/dd/yy) (mm/dd/yy) (number)

Test Solutions	Cumulative Percent Mortality[a] (Cumulative Percent Adversely Affected)[a] Test Day 1	2	3	4	5	6	7	Dry Weight[a] Total	Mean
Primary control/ Dilution water	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1.1512	0.2878
Secondary Control	N/A ( )	( )	( )	( )	( )	( )	( )	N/A	N/A
1 % Effluent	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1.3992	0.3498
3 % Effluent	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2.5)	1.2080	0.3020
10 % Effluent	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1.4792	0.3698
30 % Effluent	1 (2.5)	1 (2.5)	1 (2.5)	1 (2.5)	1 (2.5)	2 (5)	3 (7.5)	1.3940	0.3485
100 % Effluent	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1.3480	0.3370
Near-Field Sample	N/A ( )	( )	( )	( )	( )	( )	( )	N/A	N/A
Far-Field Sample	N/A ( )	( )	( )	( )	( )	( )	( )	N/A	N/A

NOEC Values	100 %	100 %	100 %	100 %	100 %	100 %	100 %	Calculated TUc Value for Survival: 1.00
95% Confidence Limits LL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
UL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
EC_{50} Values	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Calculated TUc Value for Reproduction: 1.00
95% Confidence Limits LL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
UL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

7-day NOEC for Mortality: 100%	7-day NOEC for Growth: 100%	Method(s) Used to Determine Values:
7-day LOEC for Mortality: Not Detected	7-day LOEC for Growth: Not Detected	Shapiro-Wilks Test
Chronic Value for Mortality: 1.0	Chronic Value for Growth: 1.0	Bartlett's Test

a – indicate significant differences from the primary control with an * (p=0.05).

ADDITIONAL TOXICITY TEST INFORMATION

1. Submit all raw data and statistical calculations/printouts obtained during the test(s). Data must be presented in tabular form and must include all physical and/or chemical measurements recorded during the tests and sampling (e.g., temperature, conductivity, dissolved oxygen, pH, hardness, alkalinity, etc.).

2. Method(s) used to verify near-field and/or far-field sampling locations must be included if stream testing is required. Maps, sketches, and/or drawings may be used to show locations.

CONCLUSIONS/COMMENTS

Indicate below any other relevant information that may aid in the evaluation of this report. Include any deviations from your SOP that were necessary for these tests and any recent Standard Reference Toxicant (SRT) results obtained. Do these results agree with previous SRT results? Attach additional pages as needed.

Standard reference Toxicant test:

Toxicant:	Potassium chloride
Date:	08/19 - 26/08
IC_{25}:	580.1 ppm
Average:	543.3 ppm
Upper Limit:	738.7 ppm
Lower Limit:	347.6 ppm
Test value +/- 2 std. Dev.:	YES

ACUTE TOXICITY TEST RESULTS

TABLE

Results of a *Ceriodaphnia* (genus) *dubia* (species) 48-Hour Static Acute Toxicity Test

Conducted 08/19/08 (mm/dd/yy) - 08/23/08 (mm/dd/yy) Using Effluent from Outfall 001 (number).

Test Solutions	Cumulative Percent Mortality (Cumulative Percent Affected)[a]				LC_{50} Values (EC_{50} Values)			
	24-Hr	48-Hr	72-Hr	96-Hr	24-Hr	48-Hr	72-Hr	96-Hr
Primary Control/ Dilution Water	0	0			>100%	>100%		
	(0)	(0)	(___)	(___)	(N/A)	(N/A)	(___)	(___)
Secondary Control	N/A				LC_{50} 95% Confidence Limits (EC_{50} 95% Confidence Limits)			
	(___)	(___)	(___)	(___)	24-Hr	48-Hr	72-Hr	96-Hr
10 % Effluent	0	0						
	(0)	(0)	(___)	(___)	LL N/A	N/A		
18 % Effluent	0	0			UL N/A	N/A		
	(0)	(0)	(___)	(___)				
32 % Effluent	0	0			LL (N/A)	(N/A)	(___)	(___)
	(0)	(0)	(___)	(___)	UL (N/A)	(N/A)	(___)	(___)
56 % Effluent	0	0			LL = Lower Limit UL = Upper Limit			
	(0)	(0)	(___)	(___)				
100 % Effluent	0	1			Calculated TU_a Value: 1.0			
	(0)	(5)	(___)	(___)				
Near-Field Sample	N/A				Method(s) Used to Determine LC_{50}, EC_{50}, and Confidence Limit Values: Visual Inspection			
	(___)	(___)	(___)	(___)				

[a]-cumulative percent affected is the total percentage of test organisms observed dead, immotile, exhibiting loss of equilibrium, or other defined endpoints (specify below):

_____.